Refine Search

Search Results -

Terms	Documents
(RER or SMRER) with (pharmaceutical adj composition)	3

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L1

Refine Search

Recall Text Clear Interrupt

Search History

DATE: Wednesday, February 02, 2005 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=OR			
L1	(RER or SMRER) with (pharmaceutical adj composition)	3	L1

END OF SEARCH HISTORY

FILE 'HOME' ENTERED AT 11:52:00 ON 02 FEB 2005

=> file medline caplus embase bitechno biosis
'BITECHNO' IS NOT A VALID FILE NAME
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
that are available. If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.
ENTER A FILE NAME OR (IGNORE):biotechno
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'MEDLINE' ENTERED AT 11:52:41 ON 02 FEB 2005

FILE 'CAPLUS' ENTERED AT 11:52:41 ON 02 FEB 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'EMBASE' ENTERED AT 11:52:41 ON 02 FEB 2005
COPYRIGHT (C) 2005 Elsevier Inc. All rights reserved.

FILE 'BIOTECHNO' ENTERED AT 11:52:41 ON 02 FEB 2005
COPYRIGHT (C) 2005 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'BIOSIS' ENTERED AT 11:52:41 ON 02 FEB 2005
Copyright (c) 2005 The Thomson Corporation.

=> s(RER or SMRER) (S) (pharmaceutical (w) composition)
S(IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s((RER or SMRER) (S) (pharmaceutical (w) composition)
S(IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s (RER or SMRER) (S) (pharmaceutical (w) composition)
L1 0 (RER OR SMRER) (S) (PHARMACEUTICAL (W) COMPOSITION)

=> s (RER or SMRER) (S) (pharmaceutical)
L2 0 (RER OR SMRER) (S) (PHARMACEUTICAL)

=> s (RER OR SMRER) (S) (composition?)
L3 95 (RER OR SMRER) (S) (COMPOSITION?)

=> duplicate remove l3
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, EMBASE, BIOTECHNO, BIOSIS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L3
L4 68 DUPLICATE REMOVE L3 (27 DUPLICATES REMOVED)

=> dl4 1- ibib,abs
DL4 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d l4 1- ibib,abs
YOU HAVE REQUESTED DATA FROM 68 ANSWERS - CONTINUE? Y/(N):y

L4 ANSWER 1 OF 68 MEDLINE on STN
ACCESSION NUMBER: 2004244618 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15142015
TITLE: Physiological and sport-specific skill response of olympic
youth soccer athletes.
AUTHOR: Vanderford M Lydia; Meyers Michael C; Skelly William A;
Stewart C Craig; Hamilton Karyn L
CORPORATE SOURCE: Department of Health and Human Development, Montana State
University, Bozeman, Montana 59717, USA.
SOURCE: Journal of strength and conditioning research / National
Strength & Conditioning Association, (2004 May) 18 (2)
334-42.
Journal code: 9415084. ISSN: 1064-8011.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(MULTICENTER STUDY)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200408
ENTRY DATE: Entered STN: 20040515
Last Updated on STN: 20040901
Entered Medline: 20040831
AB Although many studies have been focused on soccer athletes, no
comprehensive studies have been conducted on adolescent soccer athletes in
the United States. Therefore, the purpose of this study was to quantify
the physiological and sport-specific skill characteristics of Olympic
Developmental Program (ODP) soccer athletes by age group and game
experience. Following written, informed consent, 59 male athletes (age =
14.6 +/- 2.0 years; wt = 60.5 +/- 1.4 kg; ht = 172.4 +/- 1.2 cm) completed
a battery of tests to determine aerobic power (VO(2)max), heart rate
(HR(max)), ventilation (VE(max)), respiratory exchange ratio (***RER***), anaerobic threshold (AT), blood pressure (BP(rest/max)), anaerobic
power/capacity [peak power (PP), mean power (MP), total work output (TWO),

fatigue index (FI)], leg power [vertical squat jump (VJS), countermovement
jump (VJC)], body ***composition*** [percent body fat (%BF), lean body
mass (LBM)], joint range of motion (trunk, back, hip, knee, and ankle),
and agility/sport-specific skills (T-test, line drill test, juggling test,
Johnson wall volley, and modified-Zelenka circuit). Factor analyses with
subsequent multivariate analyses of variance (MANOVAs) indicated
significant main effects across age (p = 0.0001) but not by game
experience (p = 0.82). Older athletes exhibited greater height, weight,
LBM, VE(max), Time(max), PP, TWO, and VSJ values than younger athletes.
Although not significant, there were differences with increasing age in
the agility tests (T-test, wall volley, and juggling test). In
conclusion, improvements in anaerobic power, agility, and sport-specific
skill should be addressed at this developmental level of competition.

L4 ANSWER 2 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2003237859 EMBASE
TITLE: Effects of dietary fat on muscle substrates, metabolism,
and performance in athletes.
AUTHOR: Vogt M.; Puntschart A.; Howald H.; Mueller B.; Mannhart C.;
Gfeller-Tuescher L.; Mullis P.; Hoppeler H.
CORPORATE SOURCE: Dr. H. Hoppeler, University of Bern, Institute of Anatomy,
Buehlstrasse 26, 3000 Bern 9, Switzerland.
hoppeler@ana.unibe.ch
SOURCE: Medicine and Science in Sports and Exercise, (1 Jun 2003)
35/6 (952-960).
Refs: 42
ISSN: 0195-9131 CODEN: MSCSBJ
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Introduction: The present investigation aimed at identifying differences
in muscle structural ***composition*** , substrate selection, and
performance capacity in highly trained endurance athletes as a consequence
of consuming a high-fat or a low-fat diet. Methods: Eleven duathletes
ingested high-fat (53% fat; HF) or high-carbohydrate diets (17% fat; LF)
for 5 wk in a randomized crossover design. Results: In m. vastus
lateralis, oxidative capacity estimated as volume of mitochondria per
volume of muscle fiber (HF: 9.86 .+-. 0.36 vs LF: 9.79 .+-. 0.52%, mean
.+-. SE) was not different after the two diet periods. Intramyocellular
lipid (IMCL) was significantly increased after HF compared with LF (1.54
.+-. 0.27% vs 0.69 .+-. 0.09%, P = 0.0076). Glycogen content was lower
after HF than after LF, but this difference was not statistically
significant (487.8 .+-. 38.2 vs 534.4 .+-. 32.6 mmol.ovrhdot.kg(-1) dry
weight, P = 0.2454). Maximal power and VO(2max) (63.6 .+-. 0.9 vs 63.9
.+-. 1.2 mL O(2).ovrhdot.min(-1).ovrhdot.kg(-1) on HF and LF) during an
incremental exercise test to exhaustion were not different between the two
diet periods. Total work output during a 20-min all-out time trial (298
.+-. 6 vs 297 .+-. 7 W) on a bicycle ergometer as well as half-marathon
running time (80 min 12 s .+-. 86 s vs 80 min 24 s .+-. 82 s) were not
different between HF and LF. Blood lactate concentrations and respiratory
exchange ratios (***RER***) were significantly lower after HF than
after LF at rest and during all submaximal exercise loads. Conclusions:
Muscle glycogen stores were maintained after a 5-wk high-fat diet period
whereas IMCL content was more than doubled. Endurance performance capacity
was maintained at moderate to high-exercise intensities with a
significantly larger contribution of lipids to total energy turnover.

L4 ANSWER 3 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2002291365 EMBASE
TITLE: Prolonged adaptation to fat-rich diet and training; effects
on body fat stores and insulin resistance in man.
AUTHOR: Helge J.W.
CORPORATE SOURCE: J.W. Helge, Copenhagen Muscle Research Centre, H:S State
Hospital, Section 7652, Blegdamsvej 9, DK-2100 Copenhagen
O, Denmark. Jhelge@cmrc.dk
SOURCE: International Journal of Obesity, (2002) 26/8 (1118-1124).
Refs: 32
ISSN: 0307-0565 CODEN: IJOBDP
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
003 Endocrinology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB OBJECTIVE: To investigate the effect of prolonged adaptation to training
and fat- or carbohydrate-rich diet on body ***composition*** and
insulin resistance. DESIGN: Longitudinal study. Of three groups two
consumed a fat-rich diet, of which one performed regular training
(FAT-Train, n = 17) and the other maintained normal habitual activity

(Fat-Control, n = 8). The third group trained and consumed a
carbohydrate-rich diet (CHO-Train, n = 16). SUBJECTS: Forty-one untrained,
healthy male subjects. MEASUREMENTS: Before and after 7 weeks body
composition was estimated from skinfold measurements. At rest the
respiratory exchange ratio (***RER***) was determined by the Douglas
bag technique. Glycogen was determined in m vastus lateralis and
concentrations of insulin and triacylglycerol in serum and glucose, fatty
acid and beta-hydroxy-butyrate in plasma was measured. The insulin
resistance index was calculated from fasting plasma insulin and glucose
values. RESULTS: Across the 7 weeks body weight was reduced (1.34 .+-.
0.3%) in all three groups, however body fat mass was decreased only in the
CHO-Train (13%) and maintained in the two FAT-groups. ***RER*** at
rest was similarly decreased (5%) in the three groups. Plasma insulin
tended to decrease (16%) in CHO-Train (P = 0.065) and remained unchanged
in the two FAT-groups. In contrast plasma glucose (4.6 .+-. 0.1 mmol/l)
and plasma FA (453 .+-. 27 .mu.mol/l) remained unchanged across the 7
weeks. The calculated insulin resistance index HOMA-R(mod) was
significantly decreased by 19% in CHO-train but remained unchanged in both
of the FAT-groups, whereas the calculated insulin secretion index
HOMA-ss(mod) was unchanged in all three groups. CONCLUSION: In the present
study we demonstrate that despite of a mild energy deficit body fat mass
was maintained after prolonged adaptation to fat-rich diet both when
normal physical activity was maintained and when training was performed.
In contrast a significant decrease in fat mass was observed when
carbohydrate-rich diet and training was combined. Furthermore we observed
that the insulin resistance index was significantly decreased only when
training was combined with a carbohydrate-rich diet.

L4 ANSWER 4 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2002423953 EMBASE
TITLE: Determinants of fat mass in prepubertal children.
AUTHOR: Muller M.J.; Grund A.; Krause H.; Siewers M.; Bosy-Westphal
A.; Rieckert H.
CORPORATE SOURCE: Prof. M.J. Muller, Inst. fur Humaner./Lebensmittel.,
Abteilung Ernahrung des Menschen, Christian-Albrechts Univ.
zu Kiel, Kiel, Germany. mmueller@nutrfoodsc.uni-kiel.de
SOURCE: British Journal of Nutrition, (1 Nov 2002) 88/5 (545-554).
Refs: 48
ISSN: 0007-1145 CODEN: BJNUAV
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
017 Public Health, Social Medicine and Epidemiology
007 Pediatrics and Pediatric Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The aim of the present study was to compare variables of metabolism,
physical activity and fitness to body ***composition*** in normal and
overweight children in a cross-sectional study design. Body
composition was assessed by anthropometric measurements and
bioelectrical impedance analysis in forty-eight prepubertal children (age
5-11 years, thirteen normal-weight, thirty-five overweight). Total energy
expenditure (EE) was measured by combination of indirect calorimetry (for
measurement of resting EE) and individually calibrated 24h heart-rate (HR)
monitoring. Activity-related EE and physical activity level (PAL) were
calculated. Time spent with min-by-min HR>FLEX HR was also used as a
marker of moderate habitual and vigorous activities. Aerobic fitness (O(2)
pulse (O(2) consumption:HR at submaximal steady-state heart rate),
submaximal O(2) consumption (V(O2submaximal)), ***RER*** at a HR of
170 beats per min) was determined by bicycle ergometry. Muscle strength of
the legs (maximal isometric strength of musculus quadriceps and of
musculus ischiocruralis (Fa max and Fb max respectively)) was measured by
computer tensiometry. When compared with normal children, overweight
children had higher skinfold thicknesses (sum of skinfold thicknesses at
four sites + 160%), fat mass (+ 142%), waist (+ 24%) and hip
circumferences (+ 14%), resting EE (+ 13%) and ***RER*** (+ 5%). No
significant group differences were found for fat-free mass, muscle mass,
total EE, activity-related EE, PAL, HR>FLEX HR, V(O2submaximal), O(2)
pulse, Fa max and Fb max as well as the fat-free mass- or muscle
mass-adjusted values for resting EE, aerobic fitness and muscle strength.
When compared with normal children, overweight children had a lower
measured v. estimated resting EE (.DELTA. resting EE) and spent more time
watching television. There were positive relationships between fat-free
mass((x)) and resting EE((x)), total EE((y)), aerobic fitness((y)) and
muscle strength((y)), but only .DELTA. resting EE((x)) and HR>FLEX HR((x))

correlated with fat mass((y)). In a stepwise multivariate regression
analysis resting EE adjusted for fat-free mass and .DELTA. resting EE were
significant determinants of % fat mass and explained 29.7% of its
variance. Thus, in the present cross-sectional study, resting EE was the
most important determinant of fat mass.

L4 ANSWER 5 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2002218720 EMBASE
TITLE: Gender differences in substrate utilization during
submaximal exercise in endurance-trained subjects.
AUTHOR: Roepstorff C.; Steffensen C.H.; Madsen M.; Stallknecht B.;
Kanstrup I.-L.; Richter E.A.; Kiens B.
CORPORATE SOURCE: C. Roepstorff, Copenhagen Muscle Research Centre, Dept. of
Human Physiology, Universitetsparken 13, DK-2100 Copenhagen
O, Denmark. croepstorff@ifi.ku.dk
SOURCE: American Journal of Physiology - Endocrinology and
Metabolism, (2002) 282/2 45-2 (E435-E447).
Refs: 39
ISSN: 0193-1849 CODEN: AJPMD
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Substrate utilization across the leg during 90 min of bicycle exercise at
58% of peak oxygen uptake (VO(2 peak)) was studied in seven
endurance-trained males and seven endurance-trained, eumenorrheic females
by applying arteriovenous catheterization, stable isotopes, and muscle
biopsies. The female and male groups were matched according to VO(2 peak)
per kilogram of lean body mass, physical activity level, and training
history of the subjects. All subjects consumed the same diet, well
controlled in terms of nutrient ***composition*** as well as energy
content, for 8 days preceding the experiment, and all females were tested
in the midfollicular phase of the menstrual cycle. During exercise,
respiratory exchange ratio (***RER***) and leg respiratory quotient
(RQ) were similar in females and males. Myocellular triacylglycerol (TG)
degradation was negligible in males but amounted to 12.4 .+-. 3.2 mmol/kg
dry wt in females and corresponded to 25.0 .+-. 6.0 and 5.0 .+-. 7.3% of
total oxygen uptake in females and males, respectively (P < 0.05).
Utilization of plasma fatty acids (12.0 .+-. 2.5 and 9.6 .+-. 1.5%), blood
glucose (13.6 .+-. 1.5 and 14.3 .+-. 1.5%), and glycogen (48.5 .+-. 4.9
and 42.8 .+-. 2.1%) were similar in females and males. Thus, in females,
measured substrate oxidation accounted for 99% of the leg oxygen uptake,
whereas in males 28% of leg oxygen uptake was unaccounted for in terms of
measured oxidized lipid substrates. These findings may indicate that males
utilized additional lipid sources, presumably very low density
lipoprotein-TG or TG located between muscle fibers. On the basis of
RER and leg RQ, it is concluded that no gender difference existed
in the relative contribution from carbohydrate and lipids to the oxidative
metabolism across the leg during submaximal exercise at the same relative
workload. However, an effect of gender appears to occur in the utilization
of the different lipid sources.

L4 ANSWER 6 OF 68 MEDLINE on STN
DUPLICATE 1
ACCESSION NUMBER: 2002147681 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11832875
TITLE: Physiological responses to weight-loss intervention in
inactive obese African-American and Caucasian women.
AUTHOR: Glass J N; Miller W C; Szymanski L M; Fernhall B; Durstine
J L
CORPORATE SOURCE: Exercise Science Programs, The George Washington University
Medical Center, Washington, D.C, USA.. jolie@gwu.edu
SOURCE: Journal of sports medicine and physical fitness, (2002 Mar)
42 (1) 56-64.
Journal code: 0376337. ISSN: 0022-4707.
PUB. COUNTRY: Italy
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20020308
Last Updated on STN: 20020528
Entered Medline: 20020522
AB BACKGROUND: The physiological responses of inactive obese premenopausal
African-American and Caucasian women to the identical exercise training
and behavior modification program were compared. METHODS: Inactive obese
(96.1+/- 2.9 kg, BMI=34.8 +/- 0.7 kg/m2, % body fat=46.0 +/- 0.8; mean +/-
SEM) premenopausal (36 +/- 2 yrs) African-American (n=10) and Caucasian
(n=19) women were included. Resting metabolic rate (RMR), respiratory
exchange ratio (***RER***), and maximal aerobic power (VO2max) were
measured by indirect calorimetry, and body ***composition*** by
plethysmography. Resting and maximal heart rates, blood glucose and

lipids, and blood pressure were also measured. Treatment consisted of a
13-week diet and exercise behavior modification program. Group mean
comparisons were made with a Student's "t"-test or an ANCOVA, which
controlled for individual differences in body mass and lean body mass
(LBM). Significance was set at p<0.05. RESULTS: Initially, the groups
were not significantly different in height, mass, BMI, age, % body fat,
fat mass, LBM, girth measurements, RMR, RER, VO2max, blood pressure, or
cholesterol profile. The number of weeks completed, number of exercise
sessions completed, total minutes of exercise for the entire intervention,
average minutes of daily exercise, and total estimated exercise energy
expenditure were all similar between groups. Furthermore, both groups
reported similar dietary compliance. Both groups reduced body mass, BMI,
LBM, girth measurements, and increased VO2max (mlO2 x kg-1 x min-1)
significantly and similarly. CONCLUSIONS: African-American and Caucasian
women respond the same physiologically to weight loss intervention. The
higher prevalence in obesity for African-American women is not due to a
different physiological response to diet and exercise.

L4 ANSWER 7 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2002089224 EMBASE
TITLE: Long-term administration of L-carnitine to humans: Effect
on skeletal muscle carnitine content and physical performance.
AUTHOR: Wachter S.; Vogt M.; Kreis R.; Boesch C.; Bigler P.;
Hoppeler H.; Krahenbuhl S.
CORPORATE SOURCE: S. Krahenbuhl, Division of Clinical Pharmacology,
University Hospital, Petersgraben 4, CH-4031 Basel,
Switzerland. kraehenbuehl@uhbs.ch
SOURCE: Clinica Chimica Acta, (2002) 318/1-2 (51-61).
Refs: 51
ISSN: 0009-8981 CODEN: CCATAR
PUBLISHER IDENT.: S 0009-8981(01)00804-X
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Background: Long-term administration of high oral doses of L-carnitine on
the skeletal muscle ***composition*** and the physical performance has
not been studied in humans. Methods: Eight healthy male adults were
treated with 2 x 2 g of L-carnitine per day for 3 months. Muscle biopsies
and exercise tests were performed before, immediately after, and 2 months
after the treatment. Exercise tests were performed using a bicycle
ergometer for 10 min at 20%, 40%, and 60% of the individual maximal
workload (P(max)), respectively, until exhaustion. Results: There were no
significant differences between V(O2)max, ***RER*** (max), and P(max)
between the three time points investigated. At submaximal intensities, the
only difference to the pretreatment values was a 5% increase in V(O2) at
20% and 40% of P(max) 2 months after the cessation of the treatment. The
total carnitine content in the skeletal muscle was 4.10 .+-. 0.82
.mu.mol/g before, 4.79 .+-. 1.19 .mu.mol/g immediately after, and 4.19
.+-. 0.61 .mu.mol/g wet weight 2 months after the treatment (no
significant difference). Activities of the two mitochondrial enzymes
citrate synthase and cytochrome oxidase, as well as the skeletal muscle
fiber ***composition*** also remained unaffected by the administration
of L-carnitine. Conclusions: Long-term oral treatment of healthy adults
with L-carnitine is not associated with a significant increase in the
muscle carnitine content, mitochondrial proliferation, or physical
performance. Beneficial effects of the long-term treatment with
L-carnitine on the physical performance of healthy adults cannot be
explained by an increase in the carnitine muscle stores.

L4 ANSWER 8 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:823219 CAPLUS
DOCUMENT NUMBER: 135:358905
TITLE: Thermoplastic laminates with decorative color
INVENTOR(S): Sasaki, Michimasa
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001315269	A2	20011113	JP 2000-140549	20000512

PRIORITY APPLN. INFO.: JP 2000-140549 20000512
AB The laminates comprise sequential layers of thermoplastic moldings (total
light transmittance 30-80%) contg. 0.2-10% diffusing agents having
difference of refractive index .gtoreq.0.05 from that of the
thermoplastics, colored layers, and fiber-reinforced plastic layers.

Thus, a colored layer contg. Z Color (red unsatd. polyester gel coating)
and a ***compn*** . contg. U-Pika 4521 (unsatd. polyester) and
RER 231 GR 36 (glass fiber) were successively spray-coated on a
washbowl comprising Me methacrylate-ethylene glycol dimethacrylate
copolymer and BaSO4 and cured, resulting in agate-like appearance.

L4 ANSWER 9 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:528412 CAPLUS
DOCUMENT NUMBER: 135:216712
TITLE: Response reactions: definition, derivation and
classification based on the composition of the participating species
AUTHOR(S): Hoffmann, Eufrozina A.; Nagypal, Istvan
CORPORATE SOURCE: Department of Physical Chemistry, University of
Szeged, Szeged, H-6701, Hung.
SOURCE: Physical Chemistry Chemical Physics (2001), 3(15),
3107-3113
CODEN: PPCPFQ; ISSN: 1463-9076
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An interpretive concept has recently been published to rationalize the
changes generated by the change of control parameters (pressure, temp.,
compn.) in complex equil. systems. It was proven that all of the
sensitivity coeffs. (and many other thermodynamically important
quantities) may be split into terms which are uniquely assigned to the
so-called response reactions (RERs). RERs were defined by the missing
species and their derivation was based on the stoichiometrically
independent reactions (SIRs). In this paper we redefine ***RERs***
with the help of the participating species and derive them from the
compn . of the participating species. This new way of definition
and derivation leads to the classification of RERs, which was not possible
before and helps to understand the underlying chem. of governing and
regulating the equil. systems. The formulas are presented in general
form, but some examples are also given to rationalize their meaning.
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2002001862 EMBASE
TITLE: Insulin sensitivity measured by the minimal model: No
associations with fasting respiratory exchange ratio in
trained athletes.
AUTHOR: Goedecke J.H.; Levitt N.S.; St. Clair Gibson A.; Grobler
L.; Noakes T.D.; Lambert E.V.
CORPORATE SOURCE: Dr. J.H. Goedecke, UCT/MRC Res. U. Exer. Sci., University
of Cape Town, Sports Sci. Inst. of South Africa, PO Box
115, Newlands 7725, South Africa
SOURCE: Metabolism: Clinical and Experimental, (2001) 50/11
(1286-1293).
Refs: 59
ISSN: 0026-0495 CODEN: METAAJ
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
002 Physiology
035 Occupational Health and Industrial Medicine
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The aim of this study was to examine the role of fasting insulin
concentrations and tissue insulin sensitivity on whole-body substrate
oxidation in 61 well-trained subjects. Subjects underwent a frequently
sampled intravenous glucose tolerance test (FSIVGT) after a 10- to 12-hour
overnight fast. Minimal model analysis was used to determine insulin
sensitivity (S(i)). A week later, fasting (10- to 12-hour) respiratory
exchange ratio (***RER***) was measured at rest and during exercise at
25%, 50%, and 70% of peak power output (W(peak)). Prior to these
measurements, training volume, dietary intake, and muscle fiber
composition , substrate concentrations, and enzyme activities were
determined. The average fasting plasma insulin concentration was 7.3 .+-.
2.4 .mu.U/mL (4.0 to 10.5 .mu.U/mL), and the mean S(i) was 14.0 .+-. 6.1 x
(10(-4) min(-1)..mu.U(-1).mL(-1)) (2.6 to 26.3 x 10(-4)min(-1)..mu.U(-
1).mL(-1)). There was no significant correlation between fasting plasma
insulin concentration and S(i) (r = -.14, P = .336) or between these
measurements and fasting ***RER*** , measured at rest and during
exercise at 25%, 50%, and 70% W(peak). Only VO(2max) and the proportion of
type 1 muscle fibers were significantly correlated with S(i) (r = .30, P =
.045 and r = .34, P = .026, respectively), and waist-to-hip ratio (WHR)
was significantly correlated with fasting plasma insulin concentration (r
= .35, P = .006). In conclusion, S(i) and fasting plasma insulin
concentration were not associated with fasting ***RER*** at rest and
during exercise of increasing intensity in trained athletes who have high

S(i). Copyright .COPYRGT. 2001 by W.B. Saunders Company.

L4 ANSWER 11 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2000406909 EMBASE
TITLE: Intracellular events in the assembly of chylomicrons in
rabbit enterocytes.
AUTHOR: Cartwright I.J.; Plonne D.; Higgins J.A.
CORPORATE SOURCE: J.A. Higgins, Dept. of Molec. Biol./Biotechnology,
University of Sheffield, Sheffield S10 2TN, United Kingdom
SOURCE: Journal of Lipid Research, (2000) 41/11 (1728-1739).
Refs: 44
ISSN: 0022-2275 CODEN: JLPRAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
029 Clinical Biochemistry
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The aim of this study was to determine the intracellular events in
chylomicron assembly in adult villus enterocytes. We have used novel
methods for separation of the intracellular components of the secretory
compartment [rough and smooth endoplasmic reticulum (***RER*** and
SER, respectively) and Golgi], and their membrane and luminal components,
from villus enterocytes isolated from rabbit small intestine. The steady
state ***composition*** of the components of the secretory compartment
and the intracellular pools of newly synthesized apolipoprotein B-48
(apoB-48) and triacylglycerol (TAG) was determined. The observations
indicate that the SER is the main site of TAG synthesis and of chylomicron
assembly. Newly synthesized apoB-48 and TAG accumulate in the SER membrane
and are transferred into the lumen in a microsomal triglyceride transfer
protein-dependent step. In enterocytes isolated from chow-fed rabbits, in
which fat absorption is relatively slow, transfer of apoB-48 and TAG from
the SER membrane into the lumen appears to be rate limiting. In
enterocytes from fat-fed rabbits, TAG accumulates in the lumen of the SER,
suggesting that movement out of the SER lumen becomes rate limiting, when
chylomicron secretion is markedly stimulated. In these cells, the
cytosolic TAG also increased to 450 .mu.g/g enterocytes, compared with 12
.mu.g/g enterocytes from chow-fed rabbits, indicating that transfer of TAG
from the SER membrane into the secretory pathway can become saturated, so
that newly synthesized TAG moves into the cytosol.

L4 ANSWER 12 OF 68 MEDLINE on STN
DUPLICATE 2
ACCESSION NUMBER: 2001367238 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11093921
TITLE: Determinants of the variability in respiratory exchange
ratio at rest and during exercise in trained athletes.
AUTHOR: Goedecke J H; St Clair Gibson A; Grobler L; Collins M;
Noakes T D; Lambert E V
CORPORATE SOURCE: University of Cape Town Bioenergetics of Exercise Research
Unit, University of Cape Town Medical School, Newlands
7725, South Africa.. juliag@sports.uct.ac.za
SOURCE: American journal of physiology. Endocrinology and
metabolism, (2000 Dec) 279 (6) E1325-34.
Journal code: 100901226. ISSN: 0193-1849.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200106
ENTRY DATE: Entered STN: 20010702
Last Updated on STN: 20010702
Entered Medline: 20010628
AB We examined the variability and determinants of the respiratory exchange
ratio (RER) at rest and during exercise in 61 trained cyclists. Fasting
(10-12 h) RER was measured at rest and during exercise at 25, 50, and 70%
of peak power output (W(peak)), during which blood samples were drawn for
[lactate] and [free fatty acid] ([FFA]). Before these measurements,
training volume, dietary intake and muscle fiber composition, [substrate],
and enzyme activities were determined. There was large interindividual
variability in resting RER (0.718-0.927) that persisted during exercise of
increasing intensity. The major determinants of resting RER included
muscle glycogen content, training volume, proportion of type 1 fibers,
[FFA] and [lactate], and %dietary fat intake (adjusted r(2) = 0.59, P <
0.001). Except for muscle fiber ***composition*** , these variables
also predicted ***RER*** at 25, 50, and 70% W(peak) to different
extents. The key determinant at 25% W(peak) was blood-borne [substrate],
at 50% was muscle [substrate] and glycolytic enzyme activities, and at 70%
was [lactate]. Resting RER was also a significant determinant of RER at
25 (r = 0.60) and 50% (r = 0.44) W(peak).

L4 ANSWER 13 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2001055646 EMBASE
TITLE: Resistance training increases total energy expenditure and
free-living physical activity in older adults.

AUTHOR: Hunter G.R.; Wetzstein C.J.; Fields D.A.; Brown A.; Bamman M.M.
CORPORATE SOURCE: G.R. Hunter, Education Bldg., Univ. of Alabama, 901 S. 13th St., Birmingham, AL 35294-1250, United States
SOURCE: Journal of Applied Physiology, (2000) 89/3 (977-984).
Refs: 47
ISSN: 8750-7587 CODEN: JAPHEV
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
020 Gerontology and Geriatrics
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The purpose of this study was to determine what effects 26 wk of resistance training have on resting energy expenditure (REE), total free-living energy expenditure (TEE), activity-related energy expenditure (AEE), engagement in free-living physical activity as measured by the activity-related time equivalent (ARTE) index, and respiratory exchange ratio (***RER***) in 61- to 77-yr-old men (n = 8) and women (n = 7). Before and after training, body ***composition*** (four-compartment model), strength, REE, TEE (doubly labeled water), AEE (TEE - REE + thermic response to meals), and ARTE (AEE adjusted for energy cost of standard activities) were evaluated. Strength (36%) and fat-free mass (2 kg) significantly increased, but body weight did not change. REE increased 6.8%, whereas resting ***RER*** decreased from 0.86 to 0.83. TEE (12%) and ARTE (38%) increased significantly, and AEE (30%) approached significance (P = 0.06). The TEE increase remained significant even after adjustment for the energy expenditure of the resistance training. In response to resistance training, TEE increased and ***RER*** decreased. The increase in TEE occurred as a result of increases in both REE and physical activity. These results suggest that resistance training may have value in increasing energy expenditure and lipid oxidation rates in older adults, thereby improving their metabolic profiles.

L4 ANSWER 14 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2000246523 EMBASE
TITLE: Total body fat does not influence maximal aerobic capacity.
AUTHOR: Goran M.; Fields D.A.; Hunter G.R.; Herd S.L.; Weinsier R.L.
CORPORATE SOURCE: M. Goran, Department of Preventive Medicine, Institute for Preventive Research, University of Southern California, 1540 Alcazar Street, Los Angeles, CA 90033, United States.
goran@hsc.usc.edu
SOURCE: International Journal of Obesity, (2000) 24/7 (841-848).
Refs: 42
ISSN: 0307-0565 CODEN: IJOBDP
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB OBJECTIVE: The objective of this study was to examine the influence of body weight and body ***composition*** on aspects of aerobic fitness.
Our hypothesis was that increased body weight, specifically increased fat mass (FM), would not limit VO(2max) relative to fat-free mass (FFM), but would reduce maximal and sub-maximal VO(2max) relative to body weight.
DESIGN: We used data from two ongoing studies. In Study 1 a cross-sectional analysis of 129 children across a wide spectrum of body ***composition*** was performed. In Study 2 we examined data from 31 overweight women before and after weight loss.
METHODS: VO(2max) was measured using a treadmill test. Sub-maximal aerobic capacity was evaluated with respiratory exchange ratio (***RER***), heart-rate (HR), and oxygen uptake relative to VO(2max) at a given workload (%VO(2max)). Body ***composition*** was assessed using dual energy X-ray absorptiometry (DXA) (Study 1) and a four-compartment model (Study 2). RESULTS: In Study 1, FFM was the strongest determinant of VO(2max) (r = 0.87; P < 0.0001). After adjusting for FFM, there was no significant influence of FM on VO(2max). After separating children into lean and obese sub-groups, absolute VO(2max) was significantly higher in the obese (1.24 .+-. 0.27 vs 1.56 .+-. 0.40) and VO(2max) relative to body weight was significantly lower (44.2 .+-. 3.2 vs 32.0 .+-. 4.1 ml/(kg-min)), whereas there was no significant difference when expressed relative to FFM (57.9 .+-. 5.8 vs 59.2 .+-. 4.9 ml/(kgFFM-min)). Sub-maximal aerobic capacity was significantly lower in the obese children, as indicated by a higher HR and %VO(2max); time to exhaustion was significantly lower in the obese children (15.3 .+-. 2.9 vs 11.1 .+-. 2.1 min). In Study 2, FFM was also the strongest determinant of VO(2max) before and after weight loss. The relationship between VO(2max) and FFM was identical before and after weight loss so that VO(2max) relative to FFM was identical before and

after weight loss (43.8 .+-. 4.9 vs 45.5 .+-. 6.4 ml/(kgFFM-min)).
However, sub-maximal aerobic capacity was lower in the obese state, as
indicated by a significantly higher ***RER*** (0.85 .+-. 0.06 vs 0.79
.+-. 0.05), HR (124 .+-. 14 vs 102 .+-. 11 bpm), and %VO(2max) (44% vs
36%). CONCLUSION: The major influence of body weight on VO(2max) is
explained by FFM; FM does not have any effect on VO(2max). Fatness and
excess body weight do not necessarily imply a reduced ability to maximally
consume oxygen, but excess fatness does have a detrimental effect on
submaximal aerobic capacity. Thus, fatness and VO(2max) should be
considered independent entities.

L4 ANSWER 15 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2000294524 EMBASE
TITLE: Relationships between physical activity, physical fitness,
muscle strength and nutritional state in 5- to 11-year-old
children.
AUTHOR: Grund A.; Dilba B.; Forberger K.; Krause H.; Siewers M.;
Rieckert H.; Muller M.J.
CORPORATE SOURCE: M.J. Muller, Inst. Humanernah./Lebensmittelkunde,
Agar-/Ernahrungswissenschaft. Fak., Christian-Albrechts-
Univ. zu Kiel, Dusternbrooker Weg 17-19, 24105 Kiel,
Germany. mmueller@nutrfoodsc.uni-kiel.de
SOURCE: European Journal of Applied Physiology, (2000) 82/5-6
(425-438).
Refs: 52
ISSN: 1439-6319 CODEN: EJAPFN
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
035 Occupational Health and Industrial Medicine
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The purpose of the present study was to assess different aspects of
physical activity and fitness in order to develop a basis for sport
programmes for overweight and obese children. Eighty-eight prepubertal
children (49 boys, 39 girls, 4.8-11.4 years old, 61% obese, 14% overweight
and 25% normal weight) were examined. Body ***composition*** was
assessed by combined use of anthropometrics and bioelectrical impedance
analysis. Resting energy expenditure (REE) and total energy expenditure
(TEE) were measured by indirect calorimetry (IC) and individually
calibrated 24-h heart rate (HR) monitoring, respectively. Activity-related
energy expenditure (AEE) and physical activity level (PAL) were calculated
from TEE and REE. Fitness [assessed by O2-pulse, respiratory exchange
ratio (***RER***) at submaximal work intensities] was determined by
ergometry. The maximal isometric muscle strength of the legs (m.
quadriceps, Fa max, m. ischiocruralis, Fb max) was measured by computer
tensiometry. Children were grouped according to their nutritional state,
AEE, O2-pulse and muscle strength. When compared with normal weight
children, obese and overweight children had increased fat mass (FM),
fat-free mass (FFM), waist-to-hip ratio and REE, but no group differences
were observed for TEE, AEE, and PAL. Obese and overweight children spent
more hours per day watching TV. After correction for body weight and FFM,
no group differences in REE were observed, but normal weight children had
a higher O2-pulse than overweight and obese children. By contrast,
RER was increased in the latter group. The fittest group had the
lowest body weight, BMI, FM and FFM. Children with a low O2-pulse spent
more hours per day watching TV. Grouping children according to their
degree of muscle strength, younger children (4-7.5 years) did not show
group differences in nutritional state, energy expenditure, physical
activity and fitness. However, in the group of 7.6- to 11-year-old
children, those with the greatest muscle strength and FFM had reduced BMI,
skin folds, FM and FFM. FM correlated inversely with O2-pulse, but was not
associated with TEE, AEE, PAL or muscle strength. By contrast TV
consumption was positively associated with FM. To summarize, overweight
and obese children were less fit and watched more TV than their normal
weight counterparts. FM did not correspond to TEE, AEE or PAL. Muscle
strength was not associated with FM in young children, but was inversely
associated with FM in older children. Our cross-sectional data are
consistent with the idea that increased fitness and reduced physical
inactivity may prevent children from being overweight.

L4 ANSWER 16 OF 68 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
STN
ACCESSION NUMBER: 2000:511973 BIOSIS
DOCUMENT NUMBER: PREV200000511973
TITLE: Paraspermatogenesis in Littoraria (Palustorina) articulata,
with reference to other Littorinidae (Littorinoidea,
Caenogastropoda).
AUTHOR(S): Buckland-Nicks, John A. [Reprint author]; Healy, John M.;

Jamieson, Barrie G. M.; O'Leary, Stephen
CORPORATE SOURCE: St. Francis Xavier University, Antigonish, NS, B2G 2W5,
Canada
SOURCE: Invertebrate Biology, (2000) Vol. 119, No. 3, pp. 254-264.
print.
ISSN: 1077-8306.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 22 Nov 2000
Last Updated on STN: 11 Jan 2002
AB The ultrastructure of paraspermatogenesis is examined in the littorinid
subfamily Littorininae, with special emphasis on Littoraria (Palustorina)
articulata (PHILIPPI 1846). In particular the study focuses on the fate
of the nucleus and origin of the rod bodies during parasperm development.
Parasperm of the Littorininae are rounded or oblong cells, which undergo
an abortive meiosis and eliminate part of the nucleus but often retain a
nuclear remnant. The cytoplasm is filled with numerous spherical vesicles
in all Littorininae, but in Littoraria (and in certain species of
Nodilittorina, Tectarius and Cenchritis) dense 'rod-bodies' also occur.
Littoraria (Palustorina) are unique in possessing a flagellum-like
structure termed the 'pseudotrich', which lacks an axoneme but contains
microtubules during its development. Paraspermatogonia differ from
euspermatogonia in the structure of the nucleus and in the extensive rough
endoplasmic reticulum (RER) and swollen cytoplasm. Two types of
secretions develop in Littoraria: (1) numerous, spherical granules
(composed of putative glycoprotein, also seen in other Littorininae) and
(2) rhomboid granules (***composition*** uncertain but reacting
positively to RNA stains; these granules arising within ***RER***
cisternae close to the nucleus). As the rhomboid granules fuse to form
the larger, rod-bodies (polygonal in cross section), the RER membrane
enclosing the rod-bodies becomes confluent with the outer nuclear
membrane, thereby forming a common compartment. Results of this study
clearly show that the rod-bodies are secretions of the RER cisternae and
not, as claimed in some light microscopic accounts, the product of fusion
of eusperm nuclei which have entered the parasperm cytoplasm (either by
active eusperm penetration or by phagocytosis). Developmental
characteristics of littorinid parasperm show differences between species
and may, in some cases, provide characters diagnostic of subgenera.

L4 ANSWER 17 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 1999353545 EMBASE
TITLE: Substrate oxidation and availability during acute exercise
in non-obese, obese, and post-obese sedentary females.
AUTHOR: Ezell D.M.; Geiselman P.J.; Anderson A.M.; Dowdy M.L.;
Womble L.G.; Greenway F.L.; Zachwieja J.J.
CORPORATE SOURCE: J.J. Zachwieja, Pennington Biomedical Research Ctr.,
Louisiana State University, 6400 Perkins Road, Baton Rouge,
LA 70808, United States
SOURCE: International Journal of Obesity, (1999) 23/10 (1047-1056).
Refs: 29
ISSN: 0307-0565 CODEN: IJOBDP
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
006 Internal Medicine
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB OBJECTIVE: This study compared fat oxidation rates during an acute bout of
cycle ergometry exercise (E) typical of progressive fat oxidation in
healthy, but sedentary, women of different obesity histories. DESIGN: Five
never-obese (NO) (mean age = 25 .+-. 3 (s.e.)y, mean body fat = 25.0 .+-.
2.8 (s.e.)%), five obese (O) (26 .+-. 3 y, 44.4 .+-. 1.7%), and five
post-obese (PO) (22 .+-. 1 y, 32.2 .+-. 3.0%) women cycled for 60 min at
60-65% peak VO2. To identify the specific effects of E, a control trial
consisting of 60 min of seated rest (R) was also performed. E and R trials
were counterbalanced one month apart in the follicular phase and conducted
following a 3 d normalized, eucaloric diet. MEASUREMENTS: Dual energy
X-ray absorptiometry (DEXA) was used to determine body ***composition***
, and all were weight stable for at least eight weeks prior to
experimentation. During both trials breath by breath measurements of VO2
and ***RER*** were used to determine substrate oxidation and energy
expenditure. Blood samples were collected for hormone and metabolite
analysis before, and every 15 min during exercise or rest. RESULTS: All
three groups showed a similar and progressive shift toward fat oxidation
as exercise progressed. No group differences were observed for E energy
expenditure or fat oxidation. Glycerol (P < 0.0001) and free fatty acids
(P < 0.0001) increased similarly in all three groups, but PO maintained
the highest free fatty acid level during exercise (group effect; P <

0.01). E and R decreased (P < 0.001 for both) insulin levels across
groups, with lowest levels noted in PO and highest in O. Plasma
epinephrine (P < 0.0001) and norepinephrine (P < 0.001) increased
similarly during E in all three groups. Plasma growth hormone (GH) levels
rose (P < 0.05) during E, with a pronounced increase observed in PO.
CONCLUSION: We conclude that exercise of equal relative intensity elicited
similar fat oxidation rates among NO, O, and PO women, despite group
differences in free fatty acid availability. The PO women's persistently
lower insulin and higher plasma GH levels may have enhanced free fatty
acid availability.

L4 ANSWER 18 OF 68 MEDLINE on STN
DUPLICATE 3
ACCESSION NUMBER: 1999421625 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10490806
TITLE: Interrelationships between muscle fibre type, substrate
oxidation and body fat.
AUTHOR: Helge J W; Fraser A M; Kriketos A D; Jenkins A B; Calvert G
D; Ayre K J; Storlien L H
CORPORATE SOURCE: Copenhagen Muscle Research Centre, August Krogh Institute,
University of Copenhagen, Denmark.. Jhelge@aki.ku.dk
SOURCE: International journal of obesity and related metabolic
disorders : journal of the International Association for
the Study of Obesity, (1999 Sep) 23 (9) 986-91.
Journal code: 9313169. ISSN: 0307-0565.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Space Life Sciences
ENTRY MONTH: 199911
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991118
AB OBJECTIVE: To investigate interrelationships between muscle fibre type,
respiratory exchange ratio (RER) during exercise at a fixed workload and
adiposity. DESIGN: Cross-sectional study. SUBJECTS: 21 untrained,
healthy male subjects. MEASUREMENTS: Body fat composition by dual-energy
X-ray absorptiometry (DEXA). Exercise test at 55% of VO2max, muscle fibre
type composition, muscle NADH and citrate synthase enzyme activity levels;
serum insulin, glucose and cortisol concentrations. RESULTS: Percent body
fat was inversely correlated to the proportion of type I muscle fibres
(r=-0.55, P<0.02). In addition percent trunk fat was negatively
correlated with percent type I fibres (r=-0.58, P<0.01) while this
relationship was not present for percent leg fat. There was no relation
between ***RER*** at rest or during exercise and muscle fibre type
composition or percent body fat.
CONCLUSION: Body fat and percent
type I muscle fibres were correlated, supporting skeletal muscle fibre
type as a potential etiological factor in obesity. No correlation was
observed between percent body fat and substrate oxidation at rest or
during moderate exercise, indicating that muscle fuel substrate mix does
not appear to provide a mechanism for this relation under either
condition.

L4 ANSWER 19 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 1998353822 EMBASE
TITLE: Choline supplementation increases tissue concentrations of
carnitine and lowers body fat in guinea pigs.
AUTHOR: Daily III J.W.; Hongu N.; Mynatt R.L.; Sachan D.S.
CORPORATE SOURCE: Dr. D.S. Sachan, Department of Nutrition, 229 Jesse Harris
Building, University of Tennessee, 1215 Cumberland Avenue,
Knoxville, TN 37996-1900, United States
SOURCE: Journal of Nutritional Biochemistry, (1998) 9/8 (464-470).
Refs: 28
ISSN: 0955-2863 CODEN: JNBIEL
PUBLISHER IDENT.: S 0955-2863(98)00044-8
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB It has been documented that choline supplementation results in urinary
conservation of carnitine in both humans and guinea pigs. This
conservation in guinea pigs is associated with increased concentrations of
carnitine in skeletal muscle for which no functional consequences have
been reported. The objective of this study was to evaluate changes in fat
metabolism and body ***composition*** as a consequence of the
increased tissue carnitine in choline-supplemented guinea pigs. Guinea
pigs were given free access to commercial diet without or with 3 g
choline/kg diet. Using indirect calorimetry, the respiratory exchange
ratios (***RER***) of the animals were determined under normal,
exercise, and unfed conditions. There were no differences in ***RER***
between supplemented and nonsupplemented groups under any of the
conditions. The ***RER*** data lead to the conclusion that

choline-carnitine did not promote oxidation of fat over carbohydrates for
energy. However, proximate analysis of carcass revealed significantly
lower total body fat and higher body proteins in the choline-supplemented
animals compared with the nonsupplemented animals. These apparently
contradictory results are explained by the hypothesis that the acetates
generated by the .beta.-oxidation of fatty acids are transferred to
carnitine and not oxidized to carbon dioxide, resulting in little or no
shift in ***RER*** . Copyright (C) 1998 Elsevier Science Inc.

L4 ANSWER 20 OF 68 MEDLINE on STN
DUPLICATE 4
ACCESSION NUMBER: 1998198592 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9539188
TITLE: Differences in resting metabolic rates of inactive obese
African-American and Caucasian women.
AUTHOR: Forman J N; Miller W C; Szymanski L M; Fernhall B
CORPORATE SOURCE: Exercise Science Programs, The George Washington University
Medical Center, Washington, DC 20052, USA.
SOURCE: International journal of obesity and related metabolic
disorders : journal of the International Association for
the Study of Obesity, (1998 Mar) 22 (3) 215-21.
Journal code: 9313169. ISSN: 0307-0565.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199805
ENTRY DATE: Entered STN: 19980514
Last Updated on STN: 19980514
Entered Medline: 19980507
AB OBJECTIVE: To compare resting metabolic rates (RMR) of African-American (n
= 25) and Caucasian (n = 22) premenopausal (35+/-1 y, Mean +/- s.e.m.)
women who are obese (95.2+/-2.9 kg, body mass index (BMI) = 34.7+/-0.9, %
body fat = 45.2+/-0.9), inactive and free from metabolic disorders or
medications that would affect heart rate or RMR. MEASUREMENTS: RMR and
respiratory exchange ratio (***RER***) by indirect calorimetry, body
composition by plethysmography, maximal aerobic capacity (VO2max)
and girth measurements. RESULTS: Group mean comparisons were made with a
Student's t-test or an ANCOVA, which controlled for individual differences
in body weight and lean body mass (LBM). Significance was set at P <
0.05. Groups were not significantly different in age, height, weight,
BMI, % body fat, fat mass, RER, VO2max, resting heart rate, maximal heart
rate; or chest, waist, hip, arm, thigh or calf circumferences. After
adjusting for body weight, RMR (l O2/min) for African-Americans
(0.254+/-0.007) was significantly lower (9%) than for Caucasians
(0.277+/-0.008). After RMR (l O2/min) was adjusted for LBM, an even
larger difference (-12%) persisted for African-Americans (0.250+/-0.008)
compared to Caucasians (0.281+/-0.008). Predicted RMR (kJ/d) for the
African-Americans was the same as measured RMR, whereas Caucasian women
expended about 13% more energy than predicted. When controlling for LBM,
the partial correlation between VO2max and RMR was r=0.51 when VO2max was
expressed as l/min, and r=0.56 when VO2max was expressed as ml O2/kg/min,
both highly significant (P < 0.000). CONCLUSION: The lower prevalence of
obesity in Caucasian women may be due in part to a higher RMR as well as
an under estimation of RMR in weight control therapy. Fitness level
(VO2max) as well as LBM are significant predictors of RMR for both races.

L4 ANSWER 21 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:745888 CAPLUS
DOCUMENT NUMBER: 128:48977
TITLE: Curable composite material compositions and curing
method
INVENTOR(S): Yamamoto, Tomio; Otani, Kazuo; Chiyo, Hidetake;
Sugita, shuichi; Kamata, Hirotoshi
PATENT ASSIGNEE(S): Showa Highpolymer Co., Ltd., Japan; Showa Denko K. K.
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09296016	A2	19971118	JP 1996-325643	19961205
JP 3431782	B2	20030728		
US 6171700	B1	20010109	US 1997-813237	19970307
DE 19709765	A1	19971204	DE 1997-19709765	19970310
US 6329442	B1	20011211	US 2000-708463	20001109

PRIORITY APPLN. INFO.: JP 1996-80760 A 19960308
JP 1996-325643 A 19961205
US 1997-813237 A3 19970307
OTHER SOURCE(S): MARPAT 128:48977
AB Title compns. comprise (1) a polymerizable unsatd. compd., (2) reinforcing
fibers and/or fillers, and (3) a polymn. initiation system including org.
boron compd. Z+B-R1R2R3R4 and an acidic compd. (R1-4 = alkyl, aryl, allyl,

aralkyl, alkenyl, alkynyl, silyl, heterocycle, halogen; Z+ = cation).

Thus vinyl ester resin Ripoxy R 808 100, tetrabutylammonium

butyltriphenylborate 0.5, light/heat-latent acid-forming sulfonium compd.

CI 2855 1.0 part were mixed to give a compn. Carbon cloth was impregnated

with the compn., laminated, and covered with a polyethylene terephthalate

film. The laminate was cured by irradiating with a 250 W metal halide

lamp and showed bending strength 720 MPa and flexural modulus 49 GPa.

L4 ANSWER 22 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.

on STN DUPLICATE 5

ACCESSION NUMBER: 1998096351 EMBASE

TITLE: Subcellular fractionation of polarized epithelial cells and

identification of organelle-specific proteins by two-dimensional gel electrophoresis.

AUTHOR: Fialka I.; Pasquali C.; Lottspeich F.; Ahorn H.; Huber L.A.

CORPORATE SOURCE: Dr. L.A. Huber, Institute of Molecular Pathology, Dr.

Bohr-Gasse 7, A-1030 Vienna, Austria.

huber@nt.imp.univie.ac.at

SOURCE: Electrophoresis, (1997) 18/14 (2582-2590).

Refs: 62

ISSN: 0173-0835 CODEN: ELCTDN

COUNTRY: Germany

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Protein targeting and sorting is accomplished by complex vesicular

transport processes that are tightly regulated within a cell. This is

especially important for epithelial cells because correct delivery of

newly synthesized proteins as well as recycling and sorting of

internalized membrane proteins is essential for the establishment and

preservation of cellular polarity. Many transport events, linking various

subcellular compartments, have been analyzed, but many transport

mechanisms still remain unresolved. In this study we attempted to identify

proteins specifically associated with distinct organelles in murine

mammary epithelial cells (EpH4). We isolated subcellular compartments by

continuous sucrose gradient centrifugation in order to further analyze

their protein ***composition*** by high- resolution two-dimensional

gel electrophoresis (2-DE). The successful separation of late endosomes

(LE), early endosomes (EE) and most of the rough endoplasmic reticulum (

RER) was confirmed by subsequent analysis of gradient fractions

for compartment-specific enzymes and marker proteins. Both Golgi and

plasma membrane (PM) were found to partially co-purify with EE in such

gradients. Characteristic polypeptide patterns were revealed on 2-DE gels

for fractions enriched in membranes of different origin. Based on improved

sample preparation and loading techniques (this issue, C. Pasquali et el.,

Electrophoresis, 1997, 18, 2573-2581), we were able to identify several

proteins by immunoblotting or microsequencing of Coomassie-stained spots.

This will be the basis for a further characterization of

organelle-specific molecules in epithelial cells as well as for the

establishment of a 2-DE reference map of membrane proteins from murine

mammary epithelium.

L4 ANSWER 23 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.

on STN

ACCESSION NUMBER: 97142945 EMBASE

DOCUMENT NUMBER: 1997142945

TITLE: The protein digestibility-corrected amino acid score method

overestimates quality of proteins containing

antinutritional factors and of poorly digestible proteins

supplemented with limiting amino acids in rats.

AUTHOR: Sarwar G.

CORPORATE SOURCE: G. Sarwar, Nutrition Research Division, Bureau of

Nutritional Sciences, Banting Research Centre, Tunney's

Pasture, Ottawa, Ont. K1A 0L2, Canada

SOURCE: Journal of Nutrition, (1997) 127/5 (758-764).

Refs: 52

ISSN: 0022-3166 CODEN: JONUAI

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

AB The validity of the protein digestibility-corrected amino acid score

(PDCAAS) method in predicting the quality of fourteen protein products was

compared with the commonly used protein quality methods, protein

efficiency ratio (***RER***) and net protein ratio (NPR). A rat growth

and balance study was conducted to determine protein digestibility and

quality of the animal and vegetable protein products by the PER and NPR

methods. Amine acid ***compositions*** of the products were also

determined, and PDCAAS were calculated using a rat and a human pattern of

amino acid requirements. Compared to the biological methods, the scoring

method overestimated protein quality of mustard flour [PDCAAS of 84-92%

vs. relative PER (RPER) or relative NPR (RNPR) of 0], raw black beans

(PDCAAS of 45-72% vs. RPER or RNPR of 0), alkaline-treated lactalbumin and

soybean protein isolate (PDCAAS of 44-67% vs. RPER or RNPR of 0) and
heated skim milk (PDCAAS of 29-31% vs. RPER and RNPR of 0-5%). The scoring
method also overestimated the protein quality of zein (true protein
digestibility of 63%) supplemented with Lys, Met, Thr and Trp (PDCAAS of
63-71% vs. RPER and RNPR of 3-44%). These data demonstrate that the PDCAAS
method is inappropriate for predicting protein quality of those protein
sources which may contain naturally occurring growth-depressing factors or
antinutritional factors formed during alkaline and/or heat processing.

L4 ANSWER 24 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 6
ACCESSION NUMBER: 97112974 EMBASE
DOCUMENT NUMBER: 1997112974
TITLE: MSH2 and MLH1 mutations in sporadic replication
error-positive colorectal carcinoma as assessed by
two-dimensional DNA electrophoresis.
AUTHOR: Wu Y.; Nystrom-Lahti M.; Osinga J.; Looman M.W.G.;
Peltomaki P.; Aaltonen L.A.; De la Chapelle A.; Hofstra
R.M.W.; Buys C.H.C.M.
CORPORATE SOURCE: C.H.C.M. Buys, Department of Medical Genetics, Ant.
Densinglaan 4, 9713 AW Groningen, Netherlands
SOURCE: Genes Chromosomes and Cancer, (1997) 18/4 (269-278).
Refs: 35
ISSN: 1045-2257 CODEN: GCCAES
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
022 Human Genetics
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Replication errors (***RER***) are frequently seen in both sporadic
and hereditary forms of colorectal cancer. In hereditary nonpolyposis
colorectal cancer (HNPCC), ***RER*** is associated with defects in DNA
mismatch repair genes. Two of these genes, MSH2 and MLH1, account for a
major share of this cancer syndrome. In order to assess the role of these
genes in sporadic ***RER*** + colorectal carcinoma, we have carried out
a mutation analysis of MSH2 and MLH1 by two-dimensional (2-D) DNA
electrophoresis, including heteroduplexing and separation in a denaturing
gradient. All exons were amplified using multiplex PCR and were separated
on the basis of both size and base pair ***composition*** under a
single set of experimental conditions. Exons showing a spot position
different from normal were sequenced. In screening 33 unselected, sporadic
RER + colorectal tumors, a germline mutation accompanied by loss of
heterozygosity in tumor tissue was found in two patients. They were among
the 4 patients out of the 33 screened that were diagnosed before the age
of 50 years. In 8 of the remaining 31 tumors (26%), presence of somatic
mutations (9 in total) could be demonstrated. While suggesting involvement
of other genes in a substantial part of sporadic ***RER*** + colorectal
carcinomas, our results also demonstrate a clear role of MSH2 and MLH1 in
these sporadic tumors and show that young sporadic ***RER*** +
colorectal carcinoma patients have a high probability of germline
mutations. This has important implications for genetic testing and
management of young colorectal cancer patients and their families.

L4 ANSWER 25 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 96154192 EMBASE
DOCUMENT NUMBER: 1996154192
TITLE: Metabolic propensity toward obesity in black vs white
females: Responses during rest, exercise and recovery.
AUTHOR: Chitwood L.F.; Brown S.P.; Lundy M.J.; Dupper M.A.
CORPORATE SOURCE: United States
SOURCE: International Journal of Obesity, (1996) 20/5 (455-462).
ISSN: 0307-0565 CODEN: IJOBDP
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB OBJECTIVE: To examine the existence of a metabolic propensity toward the
development of obesity in black vs white females.
DESIGN: Cross-sectional
comparison of responses during 30 min of rest, 30 min of treadmill
exercise at 65% VO(2max), and 30 min of recovery.
SUBJECTS: 22 (11 black,
11 white) healthy, normal weight, sedentary females with a family history
of obesity. MEASUREMENTS: Biometric measures (body mass index,
waist-to-hip ratio, and body ***composition*** by hydrodensiometry) to
insure inter-group homogeneity. Oxygen consumption (VO2), respiratory
exchange ratio (***RER***), insulin, glucose and free fatty acids
(FFA) during rest, exercise and recovery were measured to test for
metabolic differences between the groups. RESULTS: Black females displayed
lower VO2 during rest ($p = 0.04$) and recovery ($p = 0.04$), higher

RER during rest, exercise and recovery (p = 0.003), and higher
levels of insulin (p = 0.03). No significant differences were observed for
levels of blood glucose (p = 0.29) or serum FFA (p = 0.73). CONCLUSION:
Normal weight black and white females with comparable family histories of
obesity exhibit dissimilar metabolic responses during rest, exercise and
recovery. Lower rates of oxygen consumption, higher metabolic reliance on
carbohydrate, and higher levels of insulin may slowly impact energy
balance predisposing these black females toward the eventual onset of
obesity.

L4 ANSWER 26 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 96379865 EMBASE
DOCUMENT NUMBER: 1996379865
TITLE: Time course of vinblastine-induced autophagocytosis and
changes in the endoplasmic reticulum in murine pancreatic
acinar cells: A morphometric and biochemical study.
AUTHOR: Rez G.; Csak J.; Fellinger E.; Laszlo L.; Kovacs A.L.;
Oliva O.; Kovacs J.
CORPORATE SOURCE: Department of General Zoology, Eotvos University, pf
330,H-1445 Budapest, Hungary
SOURCE: European Journal of Cell Biology, (1996) 71/4 (341-350).
ISSN: 0171-9335 CODEN: EJCBDN
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The time course of the vinblastine(-sulfate; 10 mg/kg body weight, single
injection)-induced enlargement and subsequent regression of the
autolysosomal compartment was studied by electron microscopic
morphometrical and cell biochemical methods in order to gain information
concerning some key problems of this major route of intralysosomal
degradation of the cell's endogenous macromolecules and structures.
Detailed analysis of the dynamics of the total autophagic vacuole (AV)
compartment and its different subcompartments (early, advanced, late, and
fused AVs), as well as of changes of rough-surfaced endoplasmic reticulum
(***RER***) showed: 1. Pancreatic acinar cells react to vinblastine
biphasically, i.e. two expansion phases of the AV compartment, the first
in the 0 to 90 min and the second in the 2 to 8 h post-injectional
periods, were detected. 2. Fusions of AVs are not inhibited by
vinblastine, at least during the second expansion phase when cytoplasmic
volume fraction (CVF) of fused AVs steadily increased until tile 12th h.
Fusion of early, advanced and late AVs or ***composition*** of fused
complex vacuoles (AV(c),) are somehow regulated, as the proportion of the
three AV stages from the CVF of AV(c) was maintained constant throughout
the second expansion phase. 3. Stimulation of autophagosome formation and
resulting substrate overload seems to be the primary mode of action by
which vinblastine causes the enormous expansion of the autolysosomal
compartment. 4. Degranulation of the rough-surfaced endoplasmic reticulum
(***RER***) membranes occurs in a biphasic fashion, similarly to the
volume and surface changes of the AV compartment, thus supporting our
previous hypothesis, that labilization or change of ***RER*** may have
a role in the formation of autophagosomes. 5. Vinblastine-induced
autophagocytosis is a selective process, as mitochondria, Golgi elements
and zymogen granules are very much underrepresented, whereas ***RER***
is more than twice overrepresented in the volume of early AVs, when
compared to their volume fraction in the whole cytoplasm. 6. Immunonogold
electron microscopy revealed the presence of ubiquitinylated proteins in
advanced and late, but not in early AVs.

L4 ANSWER 27 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 96082173 EMBASE
DOCUMENT NUMBER: 1996082173
TITLE: Physical measures of recovery from anorexia nervosa during
hospitalised re-feeding.
AUTHOR: Waller E.G.; Wade A.J.; Treasure J.; Ward A.; Leonard T.;
Powell-Tuck J.
CORPORATE SOURCE: Department of Human Nutrition, London Hospital Medical
College, Turner Street,London E1 2AD, United Kingdom
SOURCE: European Journal of Clinical Nutrition, (1996) 50/3
(165-170).
ISSN: 0954-3007 CODEN: EJCNEQ
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Objective: To examine the relationship between weight gain, changes in
body ***composition*** and physiological characteristics of fitness
during the recovery from anorexia nervosa. Design: Longitudinal over eight

weeks of intensive inpatient re-feeding (Wk 0-8). Setting: The London
Hospital Medical College. Subjects: Ten female patients who agreed to
participate. Seven completed the protocol. Interventions: Dual-energy
X-ray absorptiometry (dexa) and skinfold thickness measures at Wk 0 and 8.
Weekly measures of peak expiratory flow rate and cycle ergometry (several
variables relating to aerobic work recorded at rest and during cycling at
low loads (0-60W)). Blood samples for lactate and potassium measures,
taken during cycling at Wk 0, 4 and 8 only. Results: (1) Body
composition : Mean weight gain over eight weeks was 9.6 kg, dexa
and skinfold measures showing fat gain to contribute 62% and 54%,
respectively. Both methods showed significant changes in percentage body
fat with refeeding ($P < 0.01$ and $P < 0.001$, respectively), however there
were significant differences in results between methods before ($P < 0.01$)
but not after ($P = 0.2$) refeeding. (2) Physiological function: Between
weeks 0 and 8, mean peak expiratory flow rate rose to 85% of predicted
values, cycle ergometry performance improved in six subjects (three never
reached 60 W load), mean respiratory exchange ratio (***RER***) during
cycling fell at 0 W and 20 W loads (both $P < 0.05$), and oxygen pulse
increased at rest and 0 W load cycling (both $P < 0.05$), Wk 8 values being
well below normal. Oxygen uptake at rest and all loads increased in line
with body weight gain only. No significant changes were seen in heart rate
or blood lactate and potassium levels. Conclusions: (1) Lean body and fat
mass increased significantly during eight weeks of refeeding. The
methodological difference in initial body fat measurements requires
further investigation. (2) The women had severely impaired physiological
function. Variables studied were only slowly improving with refeeding, and
work capacity was still well below normal.

L4 ANSWER 28 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 96284527 EMBASE
DOCUMENT NUMBER: 1996284527
TITLE: Heart rate response during handball singles match-play and
selected physical fitness components of experienced male
handball players.
AUTHOR: Loftin M.; Anderson P.; Lytton L.; Pittman P.; Warren B.
CORPORATE SOURCE: Dept Human Perform.//Hlth Promotion, University of New
Orleans,New Orleans, LA 70148, United States
SOURCE: Journal of Sports Medicine and Physical Fitness, (1996)
36/2 (95-99).
ISSN: 0022-4707 CODEN: JMPFA3
COUNTRY: Italy
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Limited information is available concerning the exercise response during
handball (HE) singles match-play. Also, few studies exist that have
examined V.ovrhdot.O2 peak and body ***composition*** of HE players.
The purpose of this study was to examine the heart rate (HR) response
during match play and peak physiologic responses and relative fat in
twelve experienced HE players. Peak physiologic responses were measured
during treadmill running and body ***composition*** was assessed via
hydrodensiotometry. During HE match-play, HR was measured and stored every
five seconds using a Polar Vantage XL heart watch. Physical
characteristics and peak physiologic responses included the following: Age
(yrs) 47.2; BW (kg) 78.0; height (cm) 178.9; % fat 18.9; V.ovrhdot.O2 peak
(ml kg-1 min-1) 48.0; ***RER*** peak 1.03; HR peak (bpm) 183.1 and
lactic acid peak (mmol.cntdot.l-1) 10.3. During KB match-play, HR averaged
85% of peak during one hour of play. Moreover, 67% of match-play time, HR
was >80% of peak. When HR responses were examined over one hour of
match-play (twelve, five minute blocks) only the first five minutes were
significantly different (lower) than the other 55 minutes. The exercise
intensity and the relatively stable HR response observed during HE
suggests that this activity appears to be appropriate for meeting the
American College of Sports Medicine guidelines to develop and maintain
cardiorespiratory fitness.

L4 ANSWER 29 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 7
ACCESSION NUMBER: 95284442 EMBASE
DOCUMENT NUMBER: 1995284442
TITLE: Intracellular events in the assembly of very-low-density-lipoprotein lipids with apolipoprotein B
in isolated rabbit hepatocytes.
AUTHOR: Cartwright I.J.; Higgins J.A.
CORPORATE SOURCE: Molecular Biology and Biotechnology, University of
Sheffield, PO Box 594, Firth Court,Sheffield S10 1UH,
United Kingdom
SOURCE: Biochemical Journal, (1995) 310/3 (897-907).
ISSN: 0264-6021 CODEN: BIJOAK
COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Isolated rabbit hepatocytes incorporated 35S]methionine into cellular and
secreted apolipoprotein B (apo-B), and [3H]glycerol into cellular and
secreted triacylglycerol and phospholipids. Newly synthesized apo-B was
incorporated into rough endoplasmic reticulum (***RER***), smooth
endoplasmic reticulum (SER), cis-Golgi and trans-Golgi membranes and was
preferentially transferred into the lumen of the ***RER*** with
specific radioactivities ten times those in the membrane. Radiolabelled
apo-B did not equilibrate with pre-existing unlabelled apo-B, and pools of
different specific radioactivities were established in different
subcellular fractions. Only a small fraction of the newly synthesized
apo-B was transferred to the Golgi lumen. In pulse-chase experiments, most
of the newly synthesized apo-B in the ***RER*** membrane and the
RER lumen was degraded. [3H]Glycerol was incorporated into
triacylglycerol and phospholipids in the lumen of the ***RER*** , SER,
cis-Golgi and trans-Golgi. However, in contrast with apo-B, all of the
radiolabelled lipids in the lumen of the ***RER*** , SER and cis-Golgi
were transferred to the trans-Golgi lumen or secreted. Analysis of the
lipid ***composition*** of the lumenal content fractions suggests
that, although very-low-density-lipoprotein (VLDL) lipids are present in
the endoplasmic reticulum lumen, a large fraction of these is not
associated with apo-B. Collectively these observations suggest that
assembly of apo-B into complete VLDL is not cotranslational, that most
lipids become associated with apo-B late in the endoplasmic reticulum
compartment and that the lipids are further modified in the Golgi lumen.

L4 ANSWER 30 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 94225022 EMBASE
DOCUMENT NUMBER: 1994225022
TITLE: Fatness in relation to substrate oxidation during exercise.
AUTHOR: Geerling B.J.; Alles M.S.; Murgatroyd P.R.; Goldberg G.R.;
Harding L.M.; Prentice A.M.
CORPORATE SOURCE: MRC Dunn Clinical Nutrition Centre, Hills Road,Cambridge
CB2 2DH, United Kingdom
SOURCE: International Journal of Obesity, (1994) 18/7 (453-459).
ISSN: 0307-0565 CODEN: IJOBDP
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
003 Endocrinology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The aim of this study was to test the hypothesis that differences in fuel
utilisation during exercise, determined by muscle fibre-type profile, are
an aetiological factor for obesity as proposed by Wade et al. An
investigation was carried out of relationships between body fatness
(assessed by skinfolds, densitometry and dual X-ray absorptiometry) and
fuel utilisation represented by the respiratory exchange ratio (***RER*** , assessed by indirect calorimetry) during three cycle
ergometer exercises. Exercise 1 was an exact replication of the Wade
protocol (fixed 100 Watt load and unstandardised with respect to
antecedent diet and activity). Exercises 2 (fasted) and 3 (fed) were
highly standardised and adjusted to represent the same relative workload
for each subject (45% VO(2max)). The subjects were 37 randomly-selected
untrained men. None of the exercises yielded significant correlations
between fatness and ***RER***. . The results refute the initial
hypothesis linking substrate oxidation and body fatness. Inspection of the
body ***composition*** data for Wade's subjects reveals that they were
abnormally lean. This suggests that their findings may have been
confounded by coincident correlations between fitness and fatness, and may
not represent a true causal relationship.

L4 ANSWER 31 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 94127130 EMBASE
DOCUMENT NUMBER: 1994127130
TITLE: High efficiency of type I muscle fibers improves
performance.
AUTHOR: Horowitz J.F.; Sidossis L.S.; Coyle E.F.
CORPORATE SOURCE: Human Performance Laboratory, The University of Texas at
Austin,Austin, TX 78712, United States
SOURCE: International Journal of Sports Medicine, (1994) 15/3
(152-157).
ISSN: 0172-4622 CODEN: IJSMDA
COUNTRY: Germany
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 002 Physiology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB We have recently demonstrated that people with a high percentage of Type I
muscle fibers display a relatively high muscular efficiency when cycling.

These individuals generate a relatively high muscular power output at a
given steady-state level of oxygen consumption and caloric expenditure.
The purpose of this study was to directly determine the extent to which
differences in muscle fiber ***composition*** and efficiency influence
endurance performance in competitive cyclists. The percentage of Type I
and II muscle fibers was determined from several biopsies from the vastus
lateralis which were histochemically stained for ATPase activity. During a
laboratory performance test, 14 endurance trained cyclists (mean .+-. SE;
VO2max, 5.2 .+-. 0.1 l/min; body weight, 74 .+-. 1 kg) cycled an ergometer
for 1 h at the highest work rate they could tolerate. VO2 and ***RER***
were simultaneously measured using open circuit spirometry for calculating
caloric expenditure. Subjects were divided into two groups of seven
according to their muscle fiber type ***composition*** : High % Type I
Group (> 56% Type I fibers); Normal % Type I Group (38-55% Type I fibers).
Each subject from High % Type I Group was paired with a subject from the
Normal % Type I Group according to their similarity in VO2max, blood
lactate threshold and average VO2 maintained during the 1 h performance
test. Both groups averaged 4.5 .+-. 0.1 l/min during the 1 h performance
test (i.e., 86-88% VO2max). However, the High % Type I Group, which
possessed an average of 72 .+-. 3% Type I fibers, was able to maintain a
9% higher power output (i.e., 342 .+-. 9 vs 315 .+-. 11 watts; $p < 0.001$)
than the Normal % Type I Group which possessed an average of 48 .+-. 2%
Type I fibers. Gross efficiency was thus significantly higher in the High
% Type I Group compared to the Normal % Type I Group (i.e., 21.9 .+-. 0.3%
vs. 20.4 .+-. 0.3%; $p < 0.001$). We conclude that a high percentage of Type
I muscle fibers improves endurance performance ability by significantly
increasing the power output generated for a given rate of oxygen
consumption and energy expenditure.

L4 ANSWER 32 OF 68 MEDLINE on STN
ACCESSION NUMBER: 95236117 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7719768
TITLE: The effects of immobilization on the maturation of the
anterior cruciate ligament of the rabbit knee.
AUTHOR: Amiel D; Wallace C D; Harwood F L
CORPORATE SOURCE: Department of Orthopaedics, University of California at San
Diego, USA.
CONTRACT NUMBER: AGO7996 (NIA)
AR34264 (NIAMS)
AR38159 (NIAMS)
SOURCE: Iowa orthopaedic journal, (1994) 14 134-40.
Journal code: 8908272. ISSN: 1541-5457.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Space Life Sciences
ENTRY MONTH: 199505
ENTRY DATE: Entered STN: 19950605
Last Updated on STN: 19960129
Entered Medline: 19950523
AB Immobilization-induced alterations occurred in young anterior cruciate
ligament (ACL) samples, including the loss of the rounded appearance of
the cells. The mature ACL was minimally altered by immobilization at the
light microscopy level. In the immobilized young ACL the fibroblasts
became elongated and there was loss of the normal pericellular matrix.
The immobilized mature ACL differed from controls primarily in the
intracellular ***composition*** , as there was significantly more rough
endoplasmic reticulum (***RER***) present. Collagen concentrations
were reduced only in young immobilized ACL, while no differences were
observed in the mature ACL. The collagen synthesis rate in the mature ACL
increased with immobilization, although no significant change was observed
in the young ACL. The increase in the rate of synthesis of the stress
deprived ACL in the mature animals reflected an increase in collagen
turnover rather than an increase in accumulation of collagen.

L4 ANSWER 33 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:188383 CAPLUS
DOCUMENT NUMBER: 120:188383
TITLE: Mutations of a mutS homolog in hereditary nonpolyposis
colorectal cancer
AUTHOR(S): Leach, Frederick S.; Nicolaides, Nicholas C.;
Papadopoulos, Nickolas; Liu, Bo; Jen, Jin; Parsons,
Ramon; Peltomaki, Paivi; Sistonen, Pertti; Aaltonen,
Lauri A.
CORPORATE SOURCE: Johns Hopkins Oncol. Cent., Baltimore, MD, 21231, USA
SOURCE: Cell (Cambridge, MA, United States) (1993), 75(6),
1215-25
CODEN: CELLB5; ISSN: 0092-8674
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recent studies have shown that a locus responsible for hereditary
nonpolyposis colorectal cancer (HNPCC) is on chromosome 2p and that tumors
developing in these patients contain alterations in microsatellite

sequences (RER+ phenotype). The authors have used chromosome
microdissection to obtain highly polymorphic markers from chromosome 2p16.
These and other markers were ordered in a panel of somatic cell hybrids
and used to define a 0.8 Mb interval contg. the HNPCC locus. Candidate
genes were then mapped, and one was found to lie within the 0.8 Mb
interval. The authors identified this candidate by virtue of its homol.
to mutS mismatch repair genes. CDNA clones were obtained and the sequence
used to detect germ-line mutations, including those producing termination
codons, in HNPCC kindreds. Somatic as well as germ-line mutations of the
gene were identified in RER+ tumor cells. The mutS homolog is therefore
likely to be responsible for HNPCC.

L4 ANSWER 34 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 93112716 EMBASE
DOCUMENT NUMBER: 1993112716
TITLE: Variation in total energy expenditure in young healthy
free-living men.
AUTHOR: Goran M.I.; Beer W.H.; Wolfe R.R.; Poehlman E.T.; Young
V.R.
CORPORATE SOURCE: Division of Endocrinology, Department of Medicine,
University of Vermont,Burlington, VT 05405, United States
SOURCE: Metabolism: Clinical and Experimental, (1993) 42/4
(487-496).
ISSN: 0026-0495 CODEN: METAAJ
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Interindividual and intraindividual variation in total energy expenditure
(TEE) were examined in 17 healthy, free-living men (weight, 56.4 to 82.4
kg; age, 18 to 30 years). TEE over 14 days, resting metabolic rate (RMR),
and body ***composition*** were measured two or three times during 77
days of fixed caloric intake using doubly labeled water, respiratory gas
analysis, and isotope dilution, respectively. When individual data were
averaged, TEE was most significantly related to fat-free mass ([FFM] r =
.73, P = .001), body mass (r = .70, P = .002), and RMR (r = .63, P =
.006). After adjusting TEE for BM, a significant inverse relation with age
was found (partial r = -.52, P = .032). Stepwise regression analysis
showed that 69% of individual variation in TEE was explained by BM, age,
and fasting respiratory exchange ratio (***RER***). TEE/RMR averaged
1.73 .+-. 0.25 (range, 1.38 to 2.32), and was independent of age and body
composition . In 10 subjects in whom triplicate observations of TEE
were performed, the average experimental variation for TEE was .+-.11.9%
(range, 6.1% to 19.6%) compared with a theoretical estimate of precision
of .+-.5.9% based on the reported isotope dose and analytical uncertainty.
The difference between theoretical estimates of precision and observed
experimental variation suggests that inherent random variation in
free-living TEE is .+-.10% (ie, square root of 122 - 62) in subjects
maintained on fixed caloric intake. We conclude that in young free living
men (1) BM, age, and ***RER*** are important determinants of TEE; and
(2) intraindividual variation in TEE is approximately .+-.10% due to
fluctuations in physical activity levels within individuals over time.

L4 ANSWER 35 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 94024158 EMBASE
DOCUMENT NUMBER: 1994024158
TITLE: Intracisternal crystals in pancreatic acinar cells: Failure
in the distinct aggregation of secretory proteins.
AUTHOR: Arias A.E.; Bendayan M.
CORPORATE SOURCE: Department of Anatomy, Universite de Montreal, CP 6128,Succ
A, Montreal, Que. H3C 3J7, Canada
SOURCE: European Journal of Cell Biology, (1993) 62/2 (282-293).
ISSN: 0171-9335 CODEN: EJCBDN
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Mechanisms leading to the formation of crystalline inclusions in the
cisternal space of the rough endoplasmic reticulum are poorly understood.
This phenomenon was investigated in pancreatic acinar cells using two
different experimental models: 1) Intraperitoneal injection of DL-p
chlorophenylalanine methyl ester, and 2) culture of isolated acinar cells
within the Matrigel basement membrane in the presence of 2% dimethyl
sulfoxide. Features and ***composition*** of induced crystals were
analyzed by protein A-gold and lectin-gold cytochemistry, electron
microscope autoradiography, electron energy loss spectroscopic imaging and
energy dispersive X-ray analysis. Crystal formation occurred in ribosome
partially free rough endoplasmic reticulum (***RER***) regions and was

similar in both experimental protocols. The protein A-gold revealed the
presence of nine major pancreatic enzymes in the crystals. However, the
labeling intensities varied among enzymes with higher concentrations of
amylase than chymotrypsinogen when compared to the secretory granules.
Concanavalin A and Helix pomatia labelings were weak over the crystals and
did not correspond to those of ***RER*** or secretory granules. Sulfur
contents in crystals were lower than phosphorus and their ratio was
opposite to the one found in secretory granules. Electron microscope
autoradiography demonstrated incorporation of radiolabeled leucine and
presence of newly synthesized proteins in the crystals. Furthermore, cells
containing both crystals and secretory granules displayed silver grains in
most of the cellular compartments involved in secretion. Thus, failure in
the normal concentration and sorting process of secretory proteins leading
to crystal formation includes changes in protein glycosylation and
decrease of disulfide bond formation while retaining secretory
capabilities.

L4 ANSWER 36 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 93281200 EMBASE
DOCUMENT NUMBER: 1993281200
TITLE: Histochemical localization and X-ray microanalysis of
calcium in the rat submandibular gland: Demonstration of
possible sites for microlith induction.
AUTHOR: Takano Y.; Sato Y.; Ohshima H.; Maeda T.; Kawahara I.;
Noguchi I.
CORPORATE SOURCE: Department of Oral Anatomy II, Niigata Univ. School of
Dentistry, 2-5274 Gakkocho-dori,Niigata 951, Japan
SOURCE: Archives of Histology and Cytology, (1993) 56/2 (177-184).
ISSN: 0914-9465 CODEN: AHCYEZ
COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
005 General Pathology and Pathological Anatomy
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Rapidly frozen and freeze-substituted submandibular glands of young female
rats were embedded in Epon and processed for histochemical demonstration
of calcium with the glyoxal bis (2-hydroxyanil) (GBHA) staining method.
GBHA staining of thick Epon sections revealed discrete calcium reactions
of moderate intensity in practically every secretory granule but not in
other compartments of the acinar cells. The saliva in the excretory duct
was also reactive with GBHA and showed a drastic decrease in staining
intensity toward the distal segments of excretory ducts with larger
diameters. In addition, the duct saliva contained numerous tiny particles
that were highly GBHA reactive. Stromal cells and cells lining the
excretory duct were totally free of reactions. In the acinar cells, X-ray
analysis detected distinct peaks for calcium in secretory granules and
smaller ones in the Golgi apparatus, while they were undetectable in the
rough surfaced endoplasmic reticulum (***RER***), implicating post-
RER calcium loading in the secretory pathway. Electron- dense
deposits in the duct saliva showed distinct peaks both for calcium and
phosphorus, though these appeared in the acinar secretory granules and
other cytoplasmic regions lacked phosphorus. Our observations thus
demonstrated physiological calcium in the intra- as well as extracellular
compartments of the submandibular gland, and further confirmed drastic
changes in chemical ***composition*** along the synthetic and
secretory pathways of the saliva, by both histochemical and X-ray
microanalytical methods. GBHA staining of calcium combined with X-ray
microanalysis is useful for an evaluation of the physiology and
histo-pathological changes of the salivary glands associated with initial
phases of microliths as well as sialoliths formation.

L4 ANSWER 37 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 93001564 EMBASE
DOCUMENT NUMBER: 1993001564
TITLE: Metabolic availability of oral glucose during exercise: A
reassessment.
AUTHOR: Massicotte D.; Peronnet F.; Adopo E.; Brisson G.R.;
Hillaire-Marcel C.
CORPORATE SOURCE: Departement de Kinanthropologie, Universite du Quebec a
Montreal, C.P. 8888, Succursale A,Montreal, Que. H3C 3P8,
Canada
SOURCE: Metabolism: Clinical and Experimental, (1992) 41/12
(1284-1290).
ISSN: 0026-0495 CODEN: METAAJ
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The purpose of this study was to reassess the metabolic availability of

oral glucose during prolonged exercise in man, using 13C-labeling and a
computation procedure (J Appl Physiol 69:1047-1052, 1990) that correctly
takes into account changes in isotopic ***composition*** of CO2
arising from oxidation of endogenous substrates (Rendo). These changes are
due to glucose ingestion associated with exercise. Each of the seven
subjects completed three 2-hour periods of exercise at 67% maximum oxygen
consumption (V.ovrhdot.O2max) on an ergocycle, with ingestion of water
(1,000 mL) or 60 g (in 1,000 mL water) of 13C-labeled glucose at two
levels of enrichment (13C/12C = 1.11482% and 1.13303%). As expected, Rendo
significantly increased from rest to exercise with water ingestion
(1.09888% .+-. .00196% to 1.09970% .+-. .00175%) and with glucose
ingestion (1.10002% .+-. .00159%) due to changes in the respective
contributions of endogenous carbohydrates and fat to energy requirements
as assessed by the respiratory exchange ratio (***RER***). When
changes in Rendo were taken into account, the estimated amount of
exogenous glucose oxidized was 38.8 .+-. 10.3 g. Much higher values were
found when Rendo at rest or during exercise with water ingestion were used
in the computation (42.3 .+-. 10.3 to 65.1 .+-. 20.5 g) according to the
commonly used method. Examination of data in the literature indicates that
the reported oxidation rate of exogenous glucose (g/min) is significantly
related to oxygen consumption (V.ovrhdot.O2) (L/min; r = .592) and that
exogenous glucose contributes approximately 14% to 17% to the energy
requirement. A similar relationship was observed in the present experiment
(r = .696), but the contribution of exogenous glucose to the energy
requirement was only 7% to 9%. These observations suggest that when
changes in Rendo due to ingestion of glucose associated with exercise are
not taken into account, the metabolic availability of exogenous glucose
can be overestimated.

L4 ANSWER 38 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 93005160 EMBASE
DOCUMENT NUMBER: 1993005160
TITLE: Membrane biogenesis in the presence of ethanol.
AUTHOR: Slomiany A.; Grabska M.; Grzelinska E.; Yamaki K.-I.;
Kasinathan C.; Slomiany B.A.; Slomiany B.L.
CORPORATE SOURCE: Research Center, UMDNJ-NJ Dental School, University
Heights, 110 Bergen Street,Newark, NJ 07103-2400, United States
SOURCE: Alcoholism: Clinical and Experimental Research, (1992) 16/6
(1152-1161).
ISSN: 0145-6008 CODEN: ACRSDM
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
040 Drug Dependence, Alcohol Abuse and Alcoholism
LANGUAGE: English
SUMMARY LANGUAGE: English
AB To investigate the effect of ethanol on the intracellular transport in
gastric epithelial cells, the in vitro system, generating transport
vesicles which transfer mucus glycoprotein apopeptide (apomucin) from
rough endoplasmic reticulum (***RER***) to Golgi, was assembled. The
vesicles, generated from gastric mucous cell ***RER*** microsomes and
labeled with [3H]palmitic acid, were isolated from the maternal
RER and characterized. The electron microscopy revealed that these
RER products consisted of 80 to 100 nm smooth membrane vesicles,
while the immunochemical analyses showed that they contain apomucin but
were devoid of the characteristic integral proteins of the ***RER***
membrane. Incubation of apomucin transporting vesicles with Golgi in the
presence of UDP-[3H]galactose resulted in the formation of glycosylated
mucin and fusion of the vesicles with Golgi. Formation of ER transport
vesicles was dependent on the supply of lipid precursors, and the activity
of phosphoglyceride and sphingolipid synthesizing enzymes. In the presence
of 60 and 120 mM ethanol, the vesicles were formed, but their lipid
composition was modified. The results suggest that ethanol-induced
membrane alterations are initiated at the early stages of the membrane
biogenesis and are first reflected in the lipid ***composition*** of
the intracellular transport vesicles.

L4 ANSWER 39 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 92037271 EMBASE
DOCUMENT NUMBER: 1992037271
TITLE: Effect of dietary fat on Ito cell activation by chronic
ethanol intake: A long-term serial morphometric study on
alcohol-fed and control rats.
AUTHOR: Takahashi H.; Wong K.; Jui L.; Nanji A.A.; Mendenhall C.S.;
French S.W.
CORPORATE SOURCE: Department of Pathology, Los Angeles County Harbor, UCLA
Medical Center, 1000 West Carson Street,Torrance, CA 90509,
United States

SOURCE: Alcoholism: Clinical and Experimental Research, (1991) 15/6 (1060-1066).
ISSN: 0145-6008 CODEN: ACRSDM
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 040 Drug Dependence, Alcohol Abuse and Alcoholism
LANGUAGE: English
SUMMARY LANGUAGE: English
AB We studied the effects of long-term ethanol ingestion and dietary fat on Ito cell activation morphometrically in rats. Sixteen pairs of Wistar male rats were divided into two groups, one fed tallow and the other fed corn oil as the source of dietary fat. Each group of rats were pair-fed a nutritional adequate liquid diet containing either corn oil (CF) or tallow (TF) as fat as well as protein and carbohydrate. Half of each group received ethanol, the rest were pair-fed isocaloric amounts of dextrose via an implanted gastric tube for up to 5 months. Morphometric analysis of the change in fat and rough endoplasmic reticulum (***RER***) of Ito cells was performed on electron micrographs obtained from monthly biopsies including baseline. Ito cell activation was assessed by a decrease in the ratio of fat/ ***RER*** in Ito cells. The ratio of fat/ ***RER*** in Ito cells of alcoholic rats fed the CF diet (CFA) gradually decreased. The ratio was found to be lower than in the pair-fed control rats (CFC) at 5 months of feeding. CFA: 1.74 .+-. 0.57, vs. 7.46 .+-. 2.05, respectively, $p < 0.05$, mean .+-. SE). Ito cell fat also significantly decreased at 5 months of feeding ($p < 0.05$). The fat/ ***RER*** ratio in CFA significantly decreased only subsequent to the development of fatty change, necrosis, and inflammation followed by fibrosis of the liver. In contrast, the TFA rats did not show a significant decrease in the fat/ ***RER*** ratio in the Ito cells throughout the study, while TFC rats showed an increase in the fat/ ***RER*** ratio. Minimal pathological changes were observed in the livers of CFC, TFA, and TFC rats. These results indicate that activation of Ito cells at a significant level occurred only late in the course of feeding alcohol after moderate to severe abnormalities in liver histology had developed, although activation may have begun at an earlier time of ethanol feeding. The results indicate that dietary fatty acid ***composition*** may be an important factor in the pathogenesis of ethanol-induced Ito cell activation.

L4 ANSWER 40 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 91090101 EMBASE
DOCUMENT NUMBER: 1991090101
TITLE: Subcompartment sugar residues of gastric surface mucous cells studied with labeled lectins.
AUTHOR: Ihida K.; Tsuyama S.; Kashio N.; Murata F.
CORPORATE SOURCE: Department of Anatomy, Faculty of Medicine, Kagoshisma University, 8-35-1 Sakuragaoka,Kagoshima 890, Japan
SOURCE: Histochemistry, (1991) 95/4 (329-335).
ISSN: 0301-5564 CODEN: HCMYAL
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
005 General Pathology and Pathological Anatomy
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB We examined the intracellular localization of sugar residues of the rat gastric surface mucous cells in relation to the functional polarity of the cell organellae using preembedding method with several lectins. In the surface mucous cells, the nuclear envelope and rough endoplasmic reticulum (***rER***) and cis cisternae of the Golgi stacks were intensely stained with Maclura pomifera (MPA), which is specific to .alpha.-Gal and GalNAc residues. In the Golgi apparatus, one or two cis side cisternae were stained with MPA and Dolichos biflorus (DBA) which is specific to terminal .alpha.-N-acetylgalactosamine residues, while the intermediate lamellae were intensely labeled with Arachis hypogaea (PNA) which is specific to Gal.beta. 1,3 GalNAc. Cisternae of the trans Golgi region were also stained with MPA, Ricinus communis I (RCA I) which is specific to .beta.-Gal and Limax flavus (LFA) which is specific to .alpha.-NeuAc. Immature mucous granules which are contiguous with the trans Golgi lamellae were weakly stained with RCA I, while LFA stained both immature and mature granules. The differences between each lectin's reactivity in the rough endoplasmic reticulum, in each compartment of the Golgi lamellae and in the secretory granules suggest that there are ***compositional*** and structural differences between the glycoconjugates in the respective cell organellae, reflecting the various processes of glycosylation in the gastric surface mucous cells.

L4 ANSWER 41 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 91224795 EMBASE
DOCUMENT NUMBER: 1991224795

TITLE: Ultrastructural study of cholinergic neurons in the medial
septal nucleus and vertical limb of the diagonal band of
broca in the basal forebrain of the rat.
AUTHOR: Palacios G.; Garcia-Ladona J.; Codina M.
CORPORATE SOURCE: Dept. of Cell. Biol./Physiol., Faculty of Medicine,
Autonomous University,Barcelona, Spain
SOURCE: Journal of Chemical Neuroanatomy, (1991) 4/3 (205-221).
ISSN: 0891-0618 CODEN: JCNAEE
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
008 Neurology and Neurosurgery
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The morphology, ultrastructure and synaptic relationships of the
cholinergic and non-cholinergic neurons in the medial septal nucleus (MS)
and vertical limb of the diagonal band of Broca (VDB) in the basal
forebrain of the rat were studied at the light and electron microscopic
levels. The cholinergic neurons were localized immunocytochemically using
a monoclonal antibody against choline acetyltransferase (ChAT).
Morphometric and statistical analyses showed that ChAT labelled cells
presented a predominantly oval morphology in both nuclei. The sizes of the
neurons were significantly larger in the VDB nucleus. Within the two
nuclei, two populations of cholinergic neurons were differentiated. One of
the large immunolabelled neurons presented deep indentations and prominent
nucleoli in their nonimmunoreactive nuclei. Their cytoplasm contained a
well-organized endomembrane system composed of short cisternae of rough
endoplasmic reticulum (***RER***). One or two lamellar bodies with a
peculiar ultrastructure were frequently found intercalated in this system.
The Golgi areas presented numerous coated vesicles, sequestration and
multivesicular bodies, which was indicative of an intense metabolic
activity in these cells. The second population of small immunolabelled
neurons exhibited reduced cytoplasm with a poorly developed endomembrane
system and apparent absence of lamellar bodies. The neighbouring
non-immunolabelled neurons presented a different type of organization of
the endomembrane system which was composed of scattered and loosely
arranged elongated cisternae of ***RER*** and infrequent lamellar
bodies, with a structure different from that seen in the large cholinergic
neurons. We propose that the structural differences in ***composition***
of the endomembrane system and lamellar bodies observed in the three types
of neurons in this study indicate different metabolic activities.
Symmetrical and asymmetrical synaptic contacts were observed on somata and
dendrites of labelled neurons, the latter being more frequent.
ChAT-labelled axon boutons were never seen. The absence of immunolabelled
axon terminals and the presence of immunolabelled myelinated axons leads
us to suggest that the majority of neurons in these areas are of the long
projecting type.

L4 ANSWER 42 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 90022494 EMBASE
DOCUMENT NUMBER: 1990022494
TITLE: Effects of run-training and swim-training at similar
absolute intensities on treadmill V.ovrhdot.O(2max).
AUTHOR: Lieber D.C.; Lieber R.L.; Adams W.C.
CORPORATE SOURCE: Human Performance Laboratory, Department of Physical
Education, University of California, Davis, CA 95616,
United States
SOURCE: Medicine and Science in Sports and Exercise, (1989) 21/6
(655-661).
ISSN: 0195-9131 CODEN: MSCSBJ
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
035 Occupational Health and Industrial Medicine
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Thirty-seven sedentary males, aged 28-35 yr, were either run-trained,
swim-trained, or served as controls in an 111/2-wk training study. Runners
and swimmers exercise once a d, 3 d.cntdot.wk, at a heart rate (HR)
intensity equivalent to 75% of their treadmill V.ovrhdot.O(2max).
Treadmill maximal oxygen consumption (V.ovrhdot.O(2max)), submaximal
cardiorespiratory response, and body ***composition*** parameters were
measured before and following the training period. Runners, swimmers, and
controls experienced a significant increase in treadmill V.ovrhdot.O(2max)
over the 111/2-wk study period. The 28 and 25% increases observed for the
runners and swimmers, respectively, were significantly greater than the 5%
increase observed for the controls ($P < 0.0001$). Runners and swimmers did
not differ significantly from each other with respect to this increase in
V.ovrhdot.O(2max); nor did they demonstrate significant changes in
respiratory exchange ratio (***RER***) at V.ovrhdot.O(2max) between

tests. The run-trained and swim-trained groups both experienced a decrease
in HR at a standard submaximal walking workload but did not differ
significantly from each other. Controls showed no significant change in
submaximal exercise response. A significant difference was observed among
groups ($P < 0.01$) for change in percent body fat. Changes in lean and fat
weight over the training period were significant for both the runners ($P <$
0.002) and swimmers ($P < 0.03$) but not for the controls. Taken together,
these data do not refute the concept of training specificity but do place
restrictions on the conditions under which training specificity may be
demonstrated. For example, under the training conditions in this study,
central cardiovascular stresses were nearly equivalent, and therefore
experimental groups, although trained in different exercise modes,
demonstrated improvements in treadmill V.ovrhdot.O(2max) which were
significant, equivalent, and not mode specific.

L4 ANSWER 43 OF 68 MEDLINE on STN
DUPLICATE 8
ACCESSION NUMBER: 87109446 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3027103
TITLE: A vesicular intermediate in the transport of hepatoma
secretory proteins from the rough endoplasmic reticulum to
the Golgi complex.
AUTHOR: Lodish H F; Kong N; Hirani S; Rasmussen J
CONTRACT NUMBER: GM27989 (NIGMS)
SOURCE: Journal of cell biology, (1987 Feb) 104 (2) 221-30.
Journal code: 0375356. ISSN: 0021-9525.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198703
ENTRY DATE: Entered STN: 19900303
Last Updated on STN: 19970203
Entered Medline: 19870311
AB We have identified a vesicle fraction that contains alpha 1-antitrypsin
and other human HepG2 hepatoma secretory proteins en route from the rough
endoplasmic reticulum (RER) to the cis face of the Golgi complex.
[35S]Methionine pulse-labeled cells were chased for various periods of
time, and then a postnuclear supernatant fraction was resolved on a
shallow sucrose-D2O gradient. This intermediate fraction has a density
lighter than RER or Golgi vesicles. Most alpha 1-antitrypsin in this
fraction (P1) bears N-linked oligosaccharides of ***composition***
similar to that of alpha 1-antitrypsin within the ***RER*** ; mainly
Man8GlcNac2 with lesser amounts of Man7GlcNac2 and Man9GlcNac2; this
suggests that the protein has not yet reacted with alpha-mannosidase-I on
the cis face of the Golgi complex. This light vesicle species is the
first post-ER fraction to be filled by labeled alpha 1-antitrypsin after a
short chase, and newly made secretory proteins enter this compartment in
proportion to their rate of exit from the RER and their rate of secretion
from the cells: alpha 1-antitrypsin and albumin faster than preC3 and
alpha 1-antichymotrypsin, faster, in turn, then transferrin.
Deoxynojirimycin, a drug that blocks removal of glucose residues from
alpha 1-antitrypsin in the RER and blocks its intracellular maturation,
also blocks its appearance in this intermediate compartment. Upon further
chase of the cells, we detect sequential maturation of alpha 1-antitrypsin
to two other intracellular forms: first, P2, a form that has the same gel
mobility as P1 but that bears an endoglycosidase H-resistant
oligosaccharide and is found in a compartment--probably the medial Golgi
complex--of density higher than that of the intermediate that contains P1;
and second, the mature sialylated form of alpha 1-antitrypsin.

L4 ANSWER 44 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 86234276 EMBASE
DOCUMENT NUMBER: 1986234276
TITLE: A quantitative comparison of satellite cell ultrastructure
in Duchenne muscular dystrophy, polymyositis, and normal
controls.
AUTHOR: Watkins S.C.; Cullen M.J.
CORPORATE SOURCE: Muscular Dystrophy Research Laboratories, Newcastle General
Hospital, Newcastle upon Tyne, NE4 6BE, United Kingdom
SOURCE: Muscle and Nerve, (1986) 9/8 (724-730).
CODEN: MUNEDE
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 022 Human Genetics
008 Neurology and Neurosurgery
005 General Pathology and Pathological Anatomy
001 Anatomy, Anthropology, Embryology and Histology
LANGUAGE: English
AB Failure of the muscle to regenerate successfully is an important feature
of the pathology of Duchenne muscular dystrophy (DMD). It is known that
this is not due to a numerical reduction in the population of satellite
cells. We have therefore examined the ultrastructural ***composition***
of the satellite cells in 25 DMD cases and compared them with satellite

cells from normal subjects and from polymyositis patients to try to identify morphological features that might be associated with an impaired developmental competence. Profiles of randomly and serially sectioned satellite cells were analyzed stereologically to obtain nuclear and cytoplasmic areas. Within the cytoplasm, the areas occupied by mitochondria, rough endoplasmic reticulum (***RER***), and Golgi apparatus were measured. Micropinocytotic vesicles (MPVs) at the periphery of the cells were counted. The nucleus to cytoplasm ratios and mitochondrial, ***RER*** , and Golgi volume fractions were not significantly different in the three satellite cell samples. The cells in the DMD sample contained more MPVs than those in the normal subjects. This is attributed to a generalized cell response to a physiologically altered environment in the diseased muscle.

L4 ANSWER 45 OF 68 MEDLINE on STN
DUPLICATE 9
ACCESSION NUMBER: 86088075 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3878394
TITLE: The neuronal endomembrane system. III. The origins of the axoplasmic reticulum and discrete axonal cisternae at the axon hillock.
AUTHOR: Lindsey J D; Ellisman M H
CONTRACT NUMBER: NS14718 (NINDS)
P41-RR00592 (NCRR)
SOURCE: Journal of neuroscience : official journal of the Society for Neuroscience, (1985 Dec) 5 (12) 3135-44.
Journal code: 8102140. ISSN: 0270-6474.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198602
ENTRY DATE: Entered STN: 19900321
Last Updated on STN: 19970203
Entered Medline: 19860207
AB The axoplasmic reticulum (AR) and the discrete element (e.g., vesicles, vesiculotubular bodies, multivesicular bodies, etc.) constitute the endomembrane system of the axon. It is reported here that the AR of bullfrog sciatic nerve readily fills with osmium deposits during osmium impregnation. In contrast, the discrete elements and mitochondria are highly resistant to impregnation. Hence this preparation is well suited to address the nature of possible interactions between AR and rough endoplasmic reticulum (RER) in the axon hillock. It is also ideal to study the origin of the axonal discrete elements within the cell body as well as their interaction with other somal endomembrane system components.
Tissues used in the present study were spinal ganglia, sciatic nerve, and spinal roots from Rana catesbeiana. Thick sections (1 to 2 microm) of this material were studied by high voltage electron microscopy. In some cases, osmium impregnation was followed by en bloc staining with lead aspartate. This made visible membranous structures that had not filled with osmium deposits during impregnation. Serial 170-nm-thick sections of this latter material were prepared and serial stereo pair electron micrographs of axon hillocks were collected. These were used to reconstruct three-dimensionally the AR and to study its relationship with RER and with discrete elements. The impregnated AR within the axon hillock was found to terminate as many proximally pointing finger-like projections. A large portion of these projections were found to form connections with RER. Some, however, terminated as true blind endings.
Single unimpregnated discrete cisternae were found throughout the cytoplasm of the cell body, axon hillock, and axon. Large clusters of unimpregnated vesicles were usually found in close association with the trans face of the Golgi apparatus. These results indirectly support the hypothesis that vectors of fast axonal transport, namely the discrete elements, form directly at the trans face of the Golgi apparatus. From here they move toward and subsequently down the axon without any membrane fission-fusion events with either RER or AR. AR, although it forms continuities with ***RER*** , retains a distinctly different chemical ***composition*** from ***RER*** as evidenced by its much higher affinity for osmium. Thus, it should be considered as an endomembrane component separate from, although intimately related to the RER.

L4 ANSWER 46 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 86039540 EMBASE
DOCUMENT NUMBER: 1986039540
TITLE: Ultrastructure of salivary glands of Ornithodoros (Ornithodoros) moubata (Ixodoidea: Argasidae).
AUTHOR: El Shoura S.M.
CORPORATE SOURCE: Department of Entomology, London School of Hygiene and Tropical Medicine, London WC1E 7HT, United Kingdom
SOURCE: Journal of Morphology, (1985) 186/1 (45-52).
CODEN: JOMOAT
COUNTRY: United States

DOCUMENT TYPE: Journal
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
AB The paired salivary glands of unfed adult Ornithodoros (Ornithodoros)
moubata are composed of type I (agranular) and type II (granular) alveoli.
Type I alveoli consist of one large central cell surrounded by peripheral
cells having the morphology of fluid-transporting epithelia. Type II
alveoli contain granular and agranular cells; the former are comprised of
morphologically distinct types of cells (a, b, and c) containing granules
of different structures and chemical ***composition*** with respect to
polysaccharide and protein. The agranular cells are the interstitial and
cap cells. Golgi bodies and rough endoplasmic reticulum (***RER***)
are found in all granular cells and apparently are involved in granule
formation. No appreciable structural changes were observed in type I
alveoli during or after feeding. Type c cell granules are released before
granules from types and b cells and may contain anticoagulant substances
that promote the blood flow of the host during the tick feeding. Although
the cap cells are not structurally affected by feeding, interstital cells
are developed into transporting epithelia.

L4 ANSWER 47 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 85035921 EMBASE
DOCUMENT NUMBER: 1985035921
TITLE: [Rough endoplasmatic reticulum in endothelial cells of
blood vessels].
RAUHES ENDOPLASMATISCHES RETICULUM IN DEN ENDOTHELZELLEN
GROSZER BLUTGEFASZE.
AUTHOR: Nikolov S.D.; Vancov V.N.
CORPORATE SOURCE: Institut fur Anatomie und Histologie der Medizinischen
Hochschule Varna, BG 9002 Varna, Bulgaria
SOURCE: Zeitschrift fur Mikroskopisch-Anatomische Forschung -
Abteilung 2, (1984) 98/4 (502-512).
CODEN: ZMAFB3
COUNTRY: Germany
DOCUMENT TYPE: Journal
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
021 Developmental Biology and Teratology
018 Cardiovascular Diseases and Cardiovascular Surgery
LANGUAGE: German
SUMMARY LANGUAGE: English
AB The development of rough endoplasmic reticulum (***RER***) in
endothelial cells (EC) follows the changes of the arterial and venous
endothelium through the age. In the first half of the gestation
RER is a highly developed system consisted of communicating
cisternae which contain an electron dense matrix. In the same time, the
Golgi complex is poorly developed. In the second half of the gestation, as
well as in newborn and in the most of EC during the first 10-20 postnatal
days, ***RER*** is also well-developed but, the Golgi complex is very
well organized. These morphological features suggest that younger EC are
able to synthesize and secrete thus being involved in the
composition and differentiation of the vascular wall. In adult
animals, only a single EC reveal a well-developed ***RER*** ; there are
probably secretions differentiated cells which continue to persist within
the developed permeability active endothelium. It is though, that the
fluctuation in the structural development of the ***RER*** in EC
during aging may be related to their synthetic and secretory capacity.

L4 ANSWER 48 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 85118583 EMBASE
DOCUMENT NUMBER: 1985118583
TITLE: The ultrastructure of myocardial hypertrophy: Why does the
compensated heart fail?.
AUTHOR: Legato M.J.; Mulieri L.A.; Alpert N.R.
CORPORATE SOURCE: Department of Medicine, St. Lukes-Roosevelt Hospital
Center, Columbia University College of Physicians and
Surgeons, New York, NY, United States
SOURCE: European Heart Journal, (1984) 5/SUPPL. F (251-269).
CODEN: EHJODF
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
018 Cardiovascular Diseases and Cardiovascular Surgery
049 Forensic Science Abstracts
LANGUAGE: English
AB Several qualitative features of the ultrastructure of pressure overload
and thyrotoxic myocardium are unique markers of the type and quantity of
increased work the heart has been required to perform. Furthermore, they
are reminiscent of features of normally growing myocytes, implying that
the changes in the hypertrophied cell are the consequence of normally
present capacities for adaptation to a demand for increased myocardial
work. Thyrotoxic myocardium has two features which distinguish it from
normal and pressure overloaded hearts: the mitochondria are large and have
a peculiar fragile or lacey appearance. Many myocytes show considerable

disorganization of sarcomeric myofilaments. Pressure overloaded hearts
have smaller and more numerous mitochondria than the normal myocyte. Their
sarcomeres have thicker Z bands than controls. Double intercalated discs
are also a feature of these myocytes. Several features of hypertrophied
myocytes are seen in both types of hypertrophy: ***RER*** and
ribosomes on the external nuclear membrane. There are polyribosomes
aligned along the long axes of thick filaments, presumably involved in
myosin synthesis or transformation within the cell. There are areas of
sarcomerogenesis both under the sarcolemma and within the cell at the
intercalated disc. These are characterized by fragments of myofilaments,
polyribosomes and rough endoplasmic reticulum. Quantitatively, myocyte
composition is transiently disturbed but, like that of normally
growing hearts, returns to control values as the adaptation to stress is
negotiated.

L4 ANSWER 49 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 83142176 EMBASE
DOCUMENT NUMBER: 1983142176
TITLE: Biosynthesis of high density lipoprotein by chicken liver:
Nature of nascent intracellular high density lipoprotein.
AUTHOR: Banerjee D.; Redman C.M.
CORPORATE SOURCE: Lindsley F. Kimball Res. Inst., New York Blood Cent., New
York, NY 10021, United States
SOURCE: Journal of Cell Biology, (1983) 96/3 (651-660).
CODEN: JCLBA3
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 003 Endocrinology
029 Clinical Biochemistry
048 Gastroenterology
023 Nuclear Medicine
LANGUAGE: English
AB Young chickens were administered L-[3H]leucine and after 10 or 30 min the
livers were removed and fractionated into rough (***RER***) and smooth
(SER) endoplasmic reticulum fractions and into light, intermediate, and
heavy Golgi cell fractions. The labeled high density lipoprotein (HDL),
contained within these intracellular organelles was isolated either by
immunoprecipitation using rabbit antiserum to rooster HDL, or by
ultracentrifugal flotation between densities 1.063 and 1.21 g/ml. The
radioactive apoproteins of nascent HDL were analyzed by SDS PAGE and
detected by fluorography. Analyses of radioactive apoproteins obtained by
immunoprecipitation from the contents of the ***RER*** , the SER, and
the three Golgi complex fractions revealed only one apoprotein, A1. The C
peptide present in serum HDL was not detected intracellularly. The
radioactive apoprotein A1 which is present within the cisternae of the
RER and the SER fractions failed to float, whereas apoprotein A1,
present within the Golgi apparatus, readily floated between densities
1.063 and 1.21 g/ml. The HDL particles, isolated by flotation from the
Golgi apparatus content, were further characterized by lipid and protein
analyses and by electron microscopy. Golgi HDL particles have the same
density as serum HDL. On a percentage basis, Golgi HDL contains less
protein and more phospholipids than does serum HDL. Morphologically, Golgi
HDL is different in appearance from serum HDL. It is more heterogeneous in
size, with most of the particles ranging 8.3-25 nm in diameter. The
spherical particles contain small membrane tails. Occasionally, a few
disk-shaped bilayer structures are also found within the Golgi apparatus.
These studies show that the newly synthesized apoprotein A1, present
within the ***RER*** and the SER cell fractions, is not fully
complexed with lipid and that apoprotein A1 does not acquire sufficient
lipid to float at the proper HDL density until it enters the Golgi
apparatus. The difference in chemical ***composition*** and the
heterogeneous size of Golgi HDL may be attributed to the different stages
of HDL maturation.

L4 ANSWER 50 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 84011735 EMBASE
DOCUMENT NUMBER: 1984011735
TITLE: Occurrence of crystalloids in the sinusoidal endothelial
cell of a crab-eating monkey liver.
AUTHOR: Tanuma Y.
CORPORATE SOURCE: Dep. Anat., Teikyo Univ. Sch. Med., Tokyo 173, Japan
SOURCE: Archivum Histologicum Japonicum, (1983) 46/4 (523-531).
CODEN: AHJPB6
COUNTRY: Japan
DOCUMENT TYPE: Journal
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
LANGUAGE: English
AB An electron microscope examination of the liver of the crab-eating monkey
revealed small crystalloids occurring occasionally in the thicker portion
of the cytoplasmic extension of the sinusoidal endothelium. They were

uniformly encased in a membrane sac which was mostly smooth-surfaced but
was at several points continuous to ribosome-studded cisternae of the
RER . The crystalloids were mostly polygonal in configuration and
were classified into three types. Type I crystalloids, according to the
grade of the complexity of their ***composition*** , represented the
simplest, or original, form and were composed purely of a compact bundle
of tubules measuring about 300 .ANG. in diameter. Types II and III
crystalloids were composed of tubules and an electron lucent matrix. In
type II crystalloids, the tubules were embedded parallel to one another in
two sets of matrix layers which crossed each other at a right angle, while
in type III, the matrix layers embedding the tubules cut each other at
about 70.degree.. The crystalloids are presumed to have developed from a
substance synthesized in the cisternae of the ***RER*** in the
sinusoidal endothelial cell and their investigation may aid in elucidating
the proteinic products of this ***RER*** -rich cell which have thus far
remained under dispute.

L4 ANSWER 51 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1982:436929 CAPLUS
DOCUMENT NUMBER: 97:36929
TITLE: Fatty acid composition of lipids and physicochemical
characteristics of thymus and Pliss' lymphosarcoma
membrane fractions
AUTHOR(S): Sherban, S. D.; Danko, M. I.; Monastyrskaya, B. D.;
Morgun, V. Ya.; Baglei, E. A.
CORPORATE SOURCE: R. E. Kavetskii Inst. Oncol. Probl., Kiev, USSR
SOURCE: Ukrainskii Biokhimicheskii Zhurnal (1978-1999) (1982),
54(3), 298-306
CODEN: UBZHD4; ISSN: 0201-8470
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The percentages of 8 fatty acids in the phospholipids and neutral lipids
of plasma membrane and endoplasmic reticulum of thymus and lymphosarcoma
cells were detd. No qual. differences between the normal and tumor cells
were obsd. The fatty acid spectrum of the phospholipids of thymocyte
plasma membrane differed from that of the smooth endoplasmic reticulum
(SER), but the fatty acid spectra of the neutral lipids of the 2 membranes
were practically identical. The ***compn*** . of rough endoplasmic
reticulum (***RER***) neutral lipids differed from the ***compns***
. of the other fractions. Quant., the tumor cells differed from
thymocytes in the lower concns. of C20:3 and C22:6 fatty acids in their
plasma membrane phospholipids and higher proportions of satd. fatty acids
in their neutral lipids. In growing tumor cells, the proportion of
unsatd. fatty acids in the plasma membrane and SER increased with growth,
the cholesterol/phospholipid ratio decreased, and membrane fluidity
(measured with fluorescence-polarization probes) decreased. At the same
time, fatty acid satn. in the RER increased, but the
cholesterol/phospholipid ratio and membrane fluidity did not change.

L4 ANSWER 52 OF 68 MEDLINE on STN
DUPLICATE 10
ACCESSION NUMBER: 82012627 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6268923
TITLE: Effect of diabetes and insulin replacement on the lipid
properties of hepatic smooth endoplasmic reticulum.
AUTHOR: Holloway C T; Garfield S A
CONTRACT NUMBER: 5P60AM22125 (NIADDK)
AM 26873 (NIADDK)
HL 19936 (NHLBI)
SOURCE: Lipids, (1981 Jul) 16 (7) 525-32.
Journal code: 0060450. ISSN: 0024-4201.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198111
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19811118
AB This study is a characterization of the lipid properties of the smooth and
rough endoplasmic reticulum (SER, RER) of liver from streptozotocin-
induced diabetic rats. A significant decrease in membrane microviscosity
was observed in the SER but not the RER of diabetic rats when compared to
that of normal controls. This decrease in SER membrane microviscosity
correlated with a decrease in cholesterol/phospholipid ratio of these
membranes that could be accounted for solely by a change in the membrane
cholesterol content. Changes in phospholipid fatty acyl chain composition
were also observed in the SER membranes but these changes were small when
compared to the large change in cholesterol content observed. Insulin
treatment for only one day did not significantly alter the microviscosity
of the SER but after 2, 4 and 6 days of treatment both membrane
microviscosity and membrane cholesterol content were restored to values
similar to those for normal animals. No significant changes in the
RER lipid ***composition*** were observed. It is well known

that increases in glucose-6-Pase (G-6-Pase) activity of liver ER membranes
are associated with diabetic onset. An increase in the specific activity
of G-6-Pase was observed in both SER and RER membrane preparations,
although the observed increase in the SER membrane is higher. The changes
in the G-6-Pase activity of the SER membranes were correlated with the
alterations in the microviscosity and lipid composition of these
membranes. It is postulated that lipid properties of the SER membranes
may contribute to the regulation of G-6-Pase activity in that membrane.

L4 ANSWER 53 OF 68 MEDLINE on STN
DUPLICATE 11
ACCESSION NUMBER: 82031028 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7026572
TITLE: In vitro uptake and processing of prezein and other maize
preproteins by maize membranes.
AUTHOR: Burr F A; Burr B
CONTRACT NUMBER: GM 28302-01 (NIGMS)
GM24057 (NIGMS)
SOURCE: Journal of cell biology, (1981 Aug) 90 (2) 427-34.
Journal code: 0375356. ISSN: 0021-9525.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198112
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 20000303
Entered Medline: 19811215
AB A cell-free, mRNA-dependent system has been developed for the translation
and processing of zein preproteins. A rough endoplasmic reticulum
(RER)-enriched fraction, isolated by sucrose density gradients, can be
treated with micrococcal nuclease to destroy endogenous messages. When
these membranes are added to a wheat germ protein-synthesizing system
together with zein mRNA, synthesis and processing of the polypeptides to
the mature products takes place. The ***RER*** fraction from the
endosperm has a different protein ***composition*** than that prepared
from either the shoot or nucellar tissue and processes prezein more
efficiently. The cleavage of the preproteins appears to be a
cotranslational step as the completed preprotein chains cannot be
processed, although they can be taken up to a limited extent. This small
uptake, or absorption, or unprocessed zein seems to be an artifact and may
be related to the unusual solubility properties of zein. Finally a sodium
dodecyl sulfate (SDS)-urea polyacrylamide gel system has been developed
which is particularly suited for the separation of low molecular weight
proteins (less than 10,000 daltons). Using this method, we examined the
products of in vitro zein processing and detected no presequence
polypeptides. This suggests that the zein cleavage proteinase is probably
an exopeptidase.

L4 ANSWER 54 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 81055450 EMBASE
DOCUMENT NUMBER: 1981055450
TITLE: Long-term evolution of the main changes induced by
thioacetamide on hepatocytes.
AUTHOR: Pollera M.; Malvaldi G.
CORPORATE SOURCE: Ist. Patol. Gen., Univ., 56100 Pisa, Italy
SOURCE: Tumori, (1980) 66/5 (529-548).
CODEN: TUMOAB
COUNTRY: Italy
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
016 Cancer
005 General Pathology and Pathological Anatomy
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: Italian
AB The results of an electron microscopic study of the changes in hepatocytes
induced by chronic intoxication with thioacetamide are reported. During
the poisoning aspecific toxic changes are intermingled with progressive,
preneoplastic ones. The main cell sub-populations identified are: large
hepatocytes with smooth endoplasmic reticulum (SER) hypertrophy, with or
without rough endoplasmic reticulum (***RER***) neoformation and
glycogen storage, which is starvation resistant; smaller hepatocytes,
where ***RER*** hypertrophy and ribosome accumulation are the
prominent features. Such a pattern persists for months. After the
withdrawal of the drug most of the cell changes disappear. However, during
this time a simplification of the liver structure and cell
composition takes place, allowing a sequence of cell events which
seem relevant for establishment of neoplastic progression. The
SER-hypertrophied cell appears first and gives rise, via several
intermediate stages, to the ***RER*** -hypertrophied one, which is
believed to play a key role as the ultimate precursor of cancer cells.

L4 ANSWER 55 OF 68 MEDLINE on STN
DUPLICATE 12
ACCESSION NUMBER: 80248084 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7190547
TITLE: A morphometric study of vascular smooth muscle cells in

culture.
AUTHOR: Mazurkowitz J; Vaughan D W; Franzblau C
SOURCE: In vitro, (1980 Apr) 16 (4) 337-45.
Journal code: 0063733. ISSN: 0073-5655.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198010
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19801021
AB Cultured arterial smooth muscle cells derived from different times in
culture, different passages, and different species were evaluated by a
combination of transmission electron microscopy and morphometry. The
morphometric studies focused on point counting and monitored the following
cellular components: lysosomes, myofilaments, mitochondria, ribosomes, and
rough endoplasmic reticulum (RER). Percent volume ***composition***
values for the organelles involved in protein synthesis, namely ribosomes
and ***RER*** , show significant fluctuations with time. Consistent
with these observations, the cells showed increasing myofilaments during
the early weeks in culture, which subsequently decreased significantly.
The data also indicate that rabbit cells in culture may become
synthetically quiescent with time and the distribution of cellular
components is altered with each succeeding passage. Cultured calf
(bovine) cells exhibit similar activity periods compared to rabbit but
show a significantly higher lysosomal and lower myofilament content than
rabbit. Calf cells could not be maintained for longer than 21 days in the
absence of ascorbate, whereas ascorbate affects the ultrastructure of
rabbit cells less dramatically. Age, passage, and donor, among others,
are important considerations for studying in vitro smooth muscle cells.
With proper morphologic and morphometric monitoring, these smooth muscle
cell culture systems can be important tools in the study of aging or
pathologic processes, or both.

L4 ANSWER 56 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 80116106 EMBASE
DOCUMENT NUMBER: 1980116106
TITLE: The sources of acid hydrolases for photoreceptor membrane
degradation in a grapsid crab.
AUTHOR: Blest A.D.; Stowe S.; Price D.G.
CORPORATE SOURCE: Dept. Neurobiol., RSBS, Australian Nat. Univ., Canberra,
Australia
SOURCE: Cell and Tissue Research, (1980) 205/2 (229-244).
CODEN: CTSRCS
COUNTRY: Germany
DOCUMENT TYPE: Journal
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
012 Ophthalmology
LANGUAGE: English
AB Dawn photoreceptor breakdown in the crab Leptograpsus variegatus is
analysed at the ultrastructural level. Coated vesicles derived from
microvilli are assembled as multivesicular bodies (mvbs), which degrade to
multilamellar bodies (mlbs) and are lysed. Cytochemical markers for
hydrolases were a fluoride-inhibited .beta.-glycerophosphatase and a
fluoride-insensitive p-nitrophenyl phosphatase, with indistinguishable
distributions when localised at pH 5.0. These enzymes are injected into
the secondary lysosomes from two sources: (i) Immediately after dawn Golgi
bodies are highly active, and differentiate a transtubular network, from
which tubules and vesicles detach, and can be seen fusing with mvbs and
mlbs. (ii) Saccules derived from the rough endoplasmic reticulum (
RER) provide a second source and are most often seen in
association with late mlbs. Both kinds of primary lysosome rarely give
acid phosphatase-positive responses when free in the cytosol, but are seen
to do so as they make contact with their secondary lysosomal targets.
Lipid droplets and lipofuscin bodies are interpreted as the residual
products of breakdown. These results are discussed in relation to previous
findings on photoreceptor membrane breakdown in a dinopid spider.
Attention is drawn to the implied diversity of organisation of lysosomal
compartments in receptors which internalise membranes of similar
compositions .

L4 ANSWER 57 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 81012005 EMBASE
DOCUMENT NUMBER: 1981012005
TITLE: The pig yolk sac I. Fine structure of the posthaematopoietic organ.
AUTHOR: Tiedemann K.; Minuth W.W.
CORPORATE SOURCE: I Anat. Inst., Univ. Heidelberg, D-6900 Heidelberg, Germany
SOURCE: Histochemistry, (1980) 68/2 (133-146).
CODEN: HCMYAL
COUNTRY: Germany
DOCUMENT TYPE: Journal
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
021 Developmental Biology and Teratology
005 General Pathology and Pathological Anatomy

025 Hematology
LANGUAGE: English
AB Yolk sacs from pig embryos ranging between 18 mm and 55 mm in length were
investigated by scanning electron microscopy (SEM), transmission electron
microscopy (TEM), and histochemistry. The organ was no longer present in
embryos of 70 mm length. The endoderm proliferates in embryos of about 20
mm length with gland-like endodermal cell columns and finally becomes
stratified, representing over 90% of the yolk sac mass. The endodermal
cells show a high activity of oxidoreductases and lysosomal enzymes; their
luminal surface bears few absorptive specializations. The mesothelium is
inert, as judged from its surface ultrastructure, organelle ***composition*** and enzyme content. TEM reveals the endodermal cells
to be polarized even in stratified areas. They resemble liver parenchymal
cells with respect to their basal villi, which are exposed to capillaries
with discontinuous or fenestrated endothelium. Giant mitochondria with
crystalline inclusions in the mature endodermal cytoplasm are outnumbered
by large stacks of the rough ER, which can amount to 60% of the cytoplasm.
This conspicuous ***RER*** is suspected to be the production site of
serum proteins which are discharged into the vascular bed. Close to the
time of the organ's regression, an unusual storage of material in terminal
buds of the ER was found. Intercellular canaliculi and the endocytic
apparatus of the endoderm are thought to serve regression.

L4 ANSWER 58 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1979:494597 CAPLUS
DOCUMENT NUMBER: 91:94597
TITLE: Lead isotope studies of basalts from International
Phase of Ocean Drilling [Deep Sea Drilling Project]
Leg 49
AUTHOR(S): Mattinson, James M.
CORPORATE SOURCE: Dep. Geol. Sci., Univ. California, Santa Barbara, CA,
USA
SOURCE: Initial Rep. Deep Sea Drill. Proj. (1979), Volume 49,
721-6. GPO: Washington, D. C.
CODEN: 22OIA4
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The Pb isotope ***compns*** . in basalts from the Leg 49 Reykjanes
Ridge (***RER***) transect are quite similar to those of Iceland and
the northern ***RER*** suggesting that Icelandic anomaly along the
Mid-Atlantic ridge was already fully developed at 20, and possibly 28, Myr
ago. In contrast, basalts from Holes 410 and 410A contain very radiogenic
Pb typical of ocean-island volcanic rocks and may have been derived from a
relatively undepleted off-ridge source that may reflect a major mantle
differentiation event at .apprx.1.8 Gyr B. P. New cores from the
French-American Mid-Ocean Undersea Study area confirm earlier indications
that the basalts of this region are isotopically heterogeneous.
Petrogenetic Pb-isotope mixing models are attempted for the various basalt
types.

L4 ANSWER 59 OF 68 MEDLINE on STN DUPLICATE 13
ACCESSION NUMBER: 79241198 MEDLINE
DOCUMENT NUMBER: PubMed ID: 224151
TITLE: Cytologic observations on axotomized feline Betz cells. II.
Quantitative ultrastructural findings.
AUTHOR: Dentinger M P; Barron K D; Kohberger R C; McLean B
SOURCE: Journal of neuropathology and experimental neurology, (1979
Sep) 38 (5) 551-64.
Journal code: 2985192R. ISSN: 0022-3069.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197910
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19791026
AB Quantitative electron microscopic examination was made of Betz cells of
two unoperated cats as well as cats subjected to left lateral funiculotomy
5, 10, 28 and 49 days before sacrifice. The percent cytoplasmic
composition of chromatolyzed, right-sided Betz cells contributed
by cisternal elements of ***RER*** , Golgi apparatus and dense bodies
and the percent perikaryal membrane apposed by subsurface cisterns were
unchanged from the normal despite marked qualitative alterations of the
cytoplasm. However, 49 days postoperatively mitochondrial numerical
density of axotomized, right-sided Betz cells was significantly less than
at 0, 10 and 28 days post funiculotomy. Importantly, normal-appearing
Betz cells ipsilateral to corticospinal tract section showed an increase
in mitochondrial numerical density 5 days postoperatively. Operation did
not induce change in the % perikaryal coverage by axosomatic boutons.
Retraction of axosomatic boutons, though often reported for other neuronal
populations undergoing axon reaction, is not a necessary feature of the
axon reaction of feline Betz cells.

L4 ANSWER 60 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.

on STN
ACCESSION NUMBER: 79213610 EMBASE
DOCUMENT NUMBER: 1979213610
TITLE: Comparative study on peroxidatic activity in inflammatory
cells on cutaneous and peritoneal implants.
AUTHOR: Van der Rhee H.J.; Van der Burgh-de Winter C.P.M.; Tijssen
J.G.P.; Daems Th. W.
CORPORATE SOURCE: Dept. Dermatol., Univ. Hosp., Leiden, Netherlands
SOURCE: Cell and Tissue Research, (1979) 197/3 (397-412).
CODEN: CTSRCS
COUNTRY: Germany
DOCUMENT TYPE: Journal
FILE SEGMENT: 025 Hematology
005 General Pathology and Pathological Anatomy
LANGUAGE: English
AB Inflammatory reactions were evoked by simultaneous implantation of pieces
of Melinex plastic in the subcutaneous tissues of the dorsum and in the
peritoneal cavity of rats. The cellular ***composition*** of the
Melinex-adherent cells and their peroxidatic (PO) activity were
investigated in relation to the duration of implantation. Several striking
differences were found between the subcutaneous and peritoneal implants.
On the 7th and 14th days, multinucleated giant cells were abundantly
present on the subcutaneous implants, whereas they were relatively rare on
the peritoneal implants. The subcutaneous implants bore no mast cells and
only a few eosinophilic granulocytes, but both types of cell were observed
frequently on the peritoneal implants. Macrophages and multinucleated
giant cells on the subcutaneous implants show PO activity only in the
granules or are PO negative. On the peritoneal implants three types of
macrophages can be distinguished: exudate macrophages which have PO
activity restricted to granules or are PO-negative; macrophages with PO
activity in granules and both the rough endoplasmic reticulum (***RER***
) and nuclear envelope; and resident macrophages with PO activity only in
the ***RER*** and nuclear envelope. In addition, two types of
multinucleated giant cells are found, one with and the other without PO
activity in the ***RER*** and nuclear envelope. Multnucleated giant
cells with PO activity in the ***RER*** and nuclear envelope as well
as exudate macrophages with PO activity in the ***RER*** and nuclear
envelope were mainly found 32 h and 3 days after implantation of the
Melinex in the peritoneal cavity. These findings are discussed in the
light of current knowledge of the PO activity in macrophages and
multinucleated giant cells. It is concluded that the appearance of PO
activity in the ***RER*** and nuclear envelope of exudate macrophages
and multinucleated giant cells is in all probability a transient
phenomenon, and that there is no objective evidence to support the opinion
that exudate macrophages with PO activity in the ***RER*** and nuclear
envelope are transitional cells between exudate and resident macrophages.

L4 ANSWER 61 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 78307788 EMBASE
DOCUMENT NUMBER: 1978307788
TITLE: Mouse uterine glands during the delayed and induced
implantation periods.
AUTHOR: Given R.L.; Enders A.C.
CORPORATE SOURCE: Dept. Hum. Anat., Sch. Med., Univ. California, Davis,
Calif. 95616, United States
SOURCE: Anatomical Record, (1978) 190/2 (271-283).
CODEN: ANREAK
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
010 Obstetrics and Gynecology
021 Developmental Biology and Teratology
LANGUAGE: English
AB Mouse uterine glandular epithelium during the lactationally delayed
implanatation period and after estradiol induction of implantation was
investigated using light and electron microscopy. During the delayed
implantation period the lumen of this simple tubular gland is narrowed.
The glandular epithelial cells have a well developed Golgi complex lateral
to the nucleus, and numerous cisternae of smooth and rough endoplasmic
reticula (***RER***) and many electron lucent apical vesicles of sizes
up to 0.2 .mu.m in diameter near the luminal border. The basal region
contains lipid droplets and dispersed, irregular cisternae of ***RER***
. Twenty-four hours after the administration of 17 .beta.-estradiol the
glandular lumina become dilated but the luminal content does not stain
with azure B. Ultrastructurally the glandular cells are not remarkably
different from those seen during the delay period. However, by 48 hours
after estradiol administration the glandular lumina are not only dilated
but filled with material which stains intensely with azure B and is
ultrastructurally dense and homogeneous. The apical region of the
glandular cells contains granules up to 0.4 .mu.m in diameter composed of

electron dense material similar in density to that seen in the glandular
lumen. In addition, the Golgi complex has assumed a position apical to the
nucleus, and the basal ***RER*** has an increased number and more
orderly arrangement of cisternae. The changes seen in the uterine glands
after the induction of implantation during the delay period are apparently
indicative of increased secretory activity of the glandular epithelia.
However, the contribution of the glands to the changes in uterine fluid
composition has yet to be established.

L4 ANSWER 62 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 78402271 EMBASE
DOCUMENT NUMBER: 1978402271
TITLE: The ultrastructure of Mycobacterium marinum granuloma in
man.
AUTHOR: Marsch Ch. W.; Nuemberger F.; Stuettgen G.
CORPORATE SOURCE: Poliklin., Rudolf Virchow Krankenh., Freie Univ., D-1000
Berlin 65, Germany
SOURCE: Archives of Dermatological Research, (1978) 262/2
(205-217).
CODEN: ADMFAU
COUNTRY: Germany
DOCUMENT TYPE: Journal
FILE SEGMENT: 013 Dermatology and Venereology
005 General Pathology and Pathological Anatomy
004 Microbiology
051 Leprosy and other Mycobacterial Diseases
LANGUAGE: English
SUMMARY LANGUAGE: German
AB 3 biopsies of 3-5 week-old nodular lesions in 2 patients with so-called
swimming-pool (aquarium-) granuloma have been examined by electron
microscopy. The cytohistological spectrum simultaneously comprises acute
exudative as well as chronic proliferative phenomena. Epithelioid cells
and collagen producing fibroblasts are already conspicuous in 3 week-old
granuloma. According to the cytological ***composition*** the
Mycobacterium marinum granuloma represents a high-turnover granuloma with
immunogenic origin. It is comparable to mycobacterial diseases in the
presence of well developed cell mediated immunity (Lupus vulgaris,
tuberculoid leprosy). Degrading mycobacteria have been rarely detected in
phagocytes and are compared with viable bacilli in macrophages of
experimentally infected mice. Curved and annular parallel membranes
('worm-like structures') in the cytoplasm of transformed macrophages and
in fibroblasts presumably originate from the membranes of endoplasmic
reticulum. Cord-like structures with transverse bands (periodicity 170-180
.ANG.) in the lumen of ***RER*** of some fibroblasts are interpreted
as intracellularly aggregated collagen precursors.

L4 ANSWER 63 OF 68 MEDLINE on STN
DUPLICATE 14
ACCESSION NUMBER: 77165387 MEDLINE
DOCUMENT NUMBER: PubMed ID: 856833
TITLE: Redox constituents in milk fat globule membranes and rough
endoplasmic reticulum from lactating mammary gland.
AUTHOR: Jarasch E D; Bruder G; Keenan T W; Franke W W
SOURCE: Journal of cell biology, (1977 Apr) 73 (1) 223-41.
Journal code: 0375356. ISSN: 0021-9525.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197706
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19770611
AB Milk fat globule membranes (MFGM) and rough endoplasmic reticulum (
RER) membranes were isolated from milk and lactating mammary gland
from the cow and were characterized by biochemical and electron microscope
methods in terms of gross ***composition*** (proteins, phospholipids,
neutral lipids, cholesterol, RNA, and DNA) and purity. Both fractions
contained significant amounts of a b-type cytochrome with several
properties similar to those of cytochrome b5 from liver, as well as a
rotenone-insensitive NADH- and NADPH-cytochrome c reductase. The b-type
cytochrome content in the apical plasma membrane-derived MFGM was of the
same order of magnitude as it was in RER membranes. It was characterized
by a high resistance to extraction by low- and high-salt concentrations
and nonionic detergents. MFGM contained much more flavin and much higher
activities of xanthine oxidase than the RER membranes. The same redox
components were found in MFGM and mammary RER from women, rats, mice, and
goats, but in absolute contents great differences between the species were
noted. The cytochromes described here differed from liver cytochrome b5
in some spectral properties. The alpha-band of the reduced hepatic
cytochrome b5 is asymmetric with a maximum at 555 nm that is split into
two distinct peaks at low temperatures. The alpha-band of the b-type
cytochromes from MFGM and mammary RER appears as one symmetrical peak at

about 560 nm that is not split at low temperatures. When treated with
cyanide, MFGM and mammary microsomes showed difference spectra of a
reduced b-type cytochrome. Under the same conditions, liver microsomes
gave a completely different spectrum. These findings demonstrate the
presence of a b-type cytochrome and associated redox enzymes in MFGM,
i.e., a derivative of the apical cell surface membrane that is regularly
used for envelopment of the milk fat globule during secretion.

L4 ANSWER 64 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
ACCESSION NUMBER: 1977:436889 CAPLUS
DOCUMENT NUMBER: 87:36889
TITLE: The endoplasmic reticulum of the rat liver cell in
experimental mechanical cholestasis. Correlated
biochemical and ultrastructural-morphometric studies
on structure and enzyme composition
AUTHOR(S): Denk, H.; Eckerstorfer, R.; Rohr, H. P.
CORPORATE SOURCE: Sch. Med., Univ. Vienna, Vienna, Austria
SOURCE: Experimental and Molecular Pathology (1977), 26(2),
193-203
CODEN: EXMPA6; ISSN: 0014-4800
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The structure and enzyme ***compn*** . of the endoplasmic reticulum
(ER) and smooth (SER) and rough (***RER***) microsomal subfractions
derived from choledochus-ligated rat livers were studied. Mech.
cholestasis resulted in an increase in ER per total liver but affected
neither the protein/phospholipid nor the SER/RER ratios of the microsomal
membranes. ER in cholestasis was poor in cytochrome P-450, the P-450 loss
being more pronounced in the RER than in the SER. The decrease in
cytochrome b5 was less pronounced. Microsomal UDP-glucuronyl transferase
activity (per mg of microsomal protein) remained unchanged; total activity
in the liver was elevated in proportion to the increase in total
microsomal protein. Glucose 6-phosphatase activity was significantly
decreased in SER and RER. Benzopyrene hydroxylase activity of liver
microsomes in vitro was greatly impaired in cholestasis. In contrast to
aminopyrine-N-demethylase, the benzopyrene hydroxylase activity did not
correlate with P-450 loss or loss of P-450 reductase. Cholestasis had no
effect on microsomal lipid peroxidn. and fatty acid desatn. in vitro.
Selective ligation of the middle lobe of the liver was not accompanied by
an increase in the wt. of the obstructed lobe nor by inhibition of
microsomal aminopyrine N-demethylation. However, an increase in
microsomal protein as well as a decrease in the specific microsomal
content in cytochromes P-450 and b5 and in glucose 6-phosphatase activity
was obsd., similar to the situation seen in complete cholestasis.

L4 ANSWER 65 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 77170633 EMBASE
DOCUMENT NUMBER: 1977170633
TITLE: Morphometric comparison of the midgut epithelial cells in
male and female Aedes aegypti L. (Insecta, Diptera).
AUTHOR: Rudin W.; Hecker H.
CORPORATE SOURCE: Swiss Trop. Inst., Basel, Switzerland
SOURCE: Tissue and Cell, (1976) 8/3 (459-470).
CODEN: TICEBI
DOCUMENT TYPE: Journal
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
LANGUAGE: English
AB Midgut epithelial cells of male and female Aedes aegypti, 3 days after
emergence, were compared morphometrically. The results concerning the
female, are in good agreement with those of a previous study (Hecker et
al., 1974) demonstrating that morphometric investigation of midgut
epithelia in A. aegypti can successfully be reproduced, and that the
mosquito strain used did not show quantitative morphological changes due
to laboratory rearing. In males, the cells of the anterior (A) and
posterior part (P, stomach) of the midgut differ in their quantitative
composition . Higher values are found for the females. anf for tha
basal labyrinth in the A-part. On the other hand a higher volume density
of the mitochondria is present in the P-part. No significant differences
are found in the A-part between males and female. Significant differences,
however, are present in the P-part. Distinctly more ***rer*** in the
female stomach can be correlated with the synthesis of enzymes for blood
digestion, which are absent in the male. In addition, the more complex
functions of the female P-part are also reflected by higher values for the
other organelles and membrane systems (e.g. mitochondria, basal
labyrinth).

L4 ANSWER 66 OF 68 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 75012572 EMBASE
DOCUMENT NUMBER: 1975012572

TITLE: Stereological analysis of the guinea pig pancreas. I.
Analytical model and quantitative description of nonstimulated pancreatic exocrine cells.
AUTHOR: Bolender R.P.
CORPORATE SOURCE: Dept. Anat., Univ. Berne, Switzerland
SOURCE: Journal of Cell Biology, (1974) 61/2 (269-287).
CODEN: JCLBA3
DOCUMENT TYPE: Journal
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
LANGUAGE: English
AB A stereological model which provides detailed quantitative information on the structure of the fasted, nonstimulated gland has been developed for the guinea pig pancreas. The model consists of morphologically defined space and membrane compartments which were used to describe the general ***composition*** of the tissue and the specific components of exocrine cells. The results are presented, where appropriate, relative to a cubic centimeter of pancreas, a cubic centimeter of exocrine cell cytoplasm, and to the volume of an average exocrine cell. The exocrine cells, accounting for 82% of the pancreas volume, consisted of 54% cytoplasmic matrix, 22% rough surfaced endoplasmic reticulum (***RER***), 8.3% nuclei, 8.1% mitochondria, 6.4% zymogen granules, and 0.7% condensing vacuoles. Their total membrane surface area was distributed as follows: 60% ***RER*** , 21% mitochondria, 9.9% Golgi apparatus, 4.8% plasma membranes, 2.6% zymogen granules, 1.8% plasma membrane vesicles, and 0.4% condensing vacuoles. The application of this model to the study of membrane movements associated with the secretory process is discussed within the framework of an analytical approach.

L4 ANSWER 67 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1970:474917 CAPLUS
DOCUMENT NUMBER: 73:74917
TITLE: Ultrastructural and biochemical characteristics of endoplasmic reticulum fractions of the Morris 7800 and Reuber H-35 hepatomas
AUTHOR(S): Moyer, Geoffrey H.; Murray, Robert Kincaid; Khairallah, Lamia H.; Suss, Rudolf; Pitot, Henry C.
CORPORATE SOURCE: McArdle Lab. for Cancer Res., Univ. of Wisconsin, Madison, WI, USA
SOURCE: Laboratory Investigation (1970), 23(1), 108-18
CODEN: LAINAW; ISSN: 0023-6837
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A correlative ultrastructural and biochem. study of endoplasmic reticulum (ER) fractions from the postmitochondrial supernatant fluids of the Morris 7800 and Reuber H-35 hepatomas was performed. Preliminary electron microscopy of the hepatomas confirmed the results of previous studies on these tumors. The only unusual feature was the presence of large cytoplasmic membrane whorls in the 7800 hepatoma. Smooth (SER) and rough (RER) ER fractions and a free ribosomal fraction were sepd. for comparative purposes. In general, the fractions from the hepatomas appeared ultrastructurally similar to those of normal liver, except that the cytoplasmic membrane whorls present in the 7800 hepatoma were noted to sediment in the RER fraction. Discrete globular subunits of the ER were evident in these membrane whorls. The yield of total microsomes and SER and RER fractions from hepatomas was reduced when compared with normal liver. RNA/protein ratios of the hepatoma fractions were comparable to those of normal liver and the ratio of free/membrane-bound RNA in the hepatomas was markedly increased, mainly as a result of a decrease in membrane-bound RNA. Thin layer chromatograms of phospholipids in the hepatoma membrane fractions appeared similar to those of the liver fractions, and liver tissue-specific antigen was present in the membrane fractions of both hepatomas. Glucose-6-phosphatase (EC 3.1.3.9) activities were reduced in the tumor membrane fractions, whereas esterase (EC 3.1.1.1) activities were normal in the 7800 fractions but reduced in those of the H-35. Mg-ATPase (EC 3.6.1.4) activity was markedly elevated in the microsome + SER fractions of both tumors. Aside from this latter finding the SER + ***RER*** of each tumor exhibited a similarity of ***compn*** ., emphasizing the generally identical nature of the membrane components of SER .+-. ***RER*** .

L4 ANSWER 68 OF 68 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1963:53763 CAPLUS
DOCUMENT NUMBER: 58:53763
ORIGINAL REFERENCE NO.: 58:9240a-c
TITLE: Fractionation of copolymers. Effect of composition on phase relations
AUTHOR(S): Topchiev, A. V.; Litmanovich, A. D.; Shtern, V. Ya.
CORPORATE SOURCE: Inst. Petrochem. Synthesis, Moscow
SOURCE: Doklady Akademii Nauk SSSR (1962), 147, 1389-91
CODEN: DANKAS; ISSN: 0002-3264
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable
AB Equations are derived that describe fractional pptn. of inhomogeneous
copolymers. The equations are derived on the basis of the distribution of
copolymer components between pptd. and dissolved phases insofar as this is
affected by differences in ***compn*** . of such copolymer mols. and
the differences in chem. potentials produced thereby. The fraction (f) of
the material remaining in dissolved phase is given by f = 1/(1 +
Rer (.sigma.+K.alpha.)), where R is the ratio between the concd.
and the dil. phases in equil., .alpha. is the parameter of interaction
between copolymer links as expressed in terms of the chem. ***compn***
. of the polymer links in mole fractions, r is the degree of
polymerization, and .delta. is a function of the vol. fraction of a given
component of the copolymer. Thermodynamic data on transtactic
polybutadiene. G. Natta and G. Moraglio. Rubber Plastics Age 44,
42-3(1963). Properties of transtactie polybutadiene are reviewed. Enthalpy
of fusion and of interaction with diluents for transtactic polybutadiene
of modification II are as follows: for Ph2CO .delta.Hu = 1170, x1 Tm =
245; for .alpha.-chloronaphthalene .delta.Hu = 1060, x1-Tm = 105. The
parameters for modification I are estd. by calcn. to be .delta.Hu1 = 2400
.+-. 1000, which is about double that of modification II. The entropy of
fusion for modification II, .delta.Su = 2.7 e.u./mole. This low value is
explained by the partial disorder of that modification. The low heat of
fusion of modification II helps to explain the considerable m.p. decrease
of samples having steric impurities in the polymer chain. This property
allows one to obtain homo- and copolymers of butadiene that are cryst.,
but whose m.ps. are lowered by 100.degree..

=> s (ser-met-arg-glu-arg or arg-glu-arg)
L5 110 (SER-MET-ARG-GLU-ARG OR ARG-GLU-ARG)

=> l10 (s) Composition?
L10 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l10 (s) composition
L10 NOT FOUND
The L-number entered could not be found. To see the definition
of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s l5 (s) composition?
L6 6 L5 (S) COMPOSITION?

=> duplicate remove l6
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L6
L7 4 DUPLICATE REMOVE L6 (2 DUPLICATES REMOVED)

=> d l7 1- ibib,abs
YOU HAVE REQUESTED DATA FROM 4 ANSWERS - CONTINUE? Y/(N):y

=> duplicate remove l5
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, EMBASE, BIOTECHNO, BIOSIS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L5
L10 42 DUPLICATE REMOVE L5 (68 DUPLICATES REMOVED)

=> d l10 1- ibib,abs
YOU HAVE REQUESTED DATA FROM 42 ANSWERS - CONTINUE? Y/(N):y

L10 ANSWER 1 OF 42 MEDLINE on STN
DUPLICATE 1
ACCESSION NUMBER: 2004183149 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15078567
TITLE: The peptide sequence ***Arg*** - ***Glu*** -
Arg , present in the amyloid precursor protein,
protects against memory loss caused by A beta and acts as a
cognitive enhancer.
AUTHOR: Mileusnic R; Lancashire C L; Rose S P R
CORPORATE SOURCE: Brain and Behaviour Research Group, The Open University,
Milton Keynes, MK7 6AA, UK..
r.mileusnic@open.ac.uk
SOURCE: European journal of neuroscience, (2004 Apr) 19 (7) 1933-8.
Journal code: 8918110. ISSN: 0953-816X.
PUB. COUNTRY: France
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200405
ENTRY DATE: Entered STN: 20040414
Last Updated on STN: 20040525
Entered Medline: 20040524
AB Amino acid sequences containing the palindromic tripeptide RER, matching
amino acids 328-330 of the amyloid precursor protein APP, when injected
intracerebrally prior to or just after training, protect against memory
loss induced by amyloid-beta (A beta) in a one-trial passive avoidance
task in the young chick. RER also acts as a cognitive enhancer,
strengthening memory for a weak version of the task. N-terminal acylation

of RER protects it against rapid degradation, and AcRER is effective in
restoring memory if administered peripherally. Biotinylated RER binds to
chick neuronal perikarya in an APP-displaceable manner via 66 and
approximately 110 kDa neuronal cell membrane proteins. We suggest that
RER binding is likely to exert effects on memory retention via
receptor-mediated events that include activation of second messenger
pathways. These findings suggest that RER and its derivatives may offer a
novel approach to enhancing the neuroprotective effects of APP and
alleviating the effects of memory loss in the early stages of Alzheimer's
disease.

L10 ANSWER 2 OF 42 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2003164395 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12681432
TITLE: Agonist properties of putative small-molecule somatostatin
sst2 receptor-selective antagonists.
AUTHOR: Nunn Caroline; Langenegger Daniel; Hurth Konstanze; Schmidt
Kerstin; Fehlmann Dominique; Hoyer Daniel
CORPORATE SOURCE: Nervous System Research, Novartis Pharma AG, CH-4002,
Basel, Switzerland.
SOURCE: European journal of pharmacology, (2003 Apr 4) 465 (3)
211-8.
Journal code: 1254354. ISSN: 0014-2999.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200402
ENTRY DATE: Entered STN: 20030409
Last Updated on STN: 20040211
Entered Medline: 20040210
AB The availability of antagonist ligands for somatostatin receptors is very
limited, with those that are available often displaying agonist properties
or limited receptor subtype selectivity. Hay et al. [Bioorg. Med. Chem.
Lett. 11 (2001) 2731] recently described the development of small-molecule
somatostatin receptor subtype 2 (sst(2)) selective compounds. This study
investigates the binding affinity and functional characteristics of two of
those antagonists (2 and 3) and the agonist compound, from which they were
derived (1). In radioligand binding studies using the agonist
radioligands [125I][Tyr(11)]SRIF-14 (Ala-Gly-c[Cys-Lys-Asn-Phe-Phe-Trp-Lys-
Thr-(125I-Tyr)-Thr-Ser-Cys]-OH), [125I]LTT-SRIF-28 ([Leu(8),DTrp(22),125I-
Tyr(25)]SRIF-28; Ser-Ala-Asn-Ser-Asn-Pro-Ala-Leu-Ala-Pro- ***Arg*** -
Glu - ***Arg*** -Lys-Ala-Gly-c[Cys-Lys-Asn-Phe-Phe-DTrp-Lys-Thr-
(125I-Tyr)-Thr-Ser-Cys]-OH), [125I]CGP 23996 (c[Lys-Asu-Phe-Phe-Trp-Lys-
Thr-(125I-Tyr)-Thr-Ser]), [125I][Tyr(3)]octreotide (DPhe-c[Cys-(125I-Tyr)-
DTrp-Lys-Thr-Cys]-Thr-OH) and [125I][Tyr(10)]cortistatin-14
(Pro-c[Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-(125I-Tyr)-Ser-Ser-Cys]-Lys) at
human recombinant somatostatin receptors expressed in Chinese hamster lung
fibroblast (CCL39) cells and native rat cortex, the compounds bound with
high affinity (pK(d) 6.8-9.7) and selectivity to human sst(2) receptors.
Some affinity was also observed for sst(5) labelled by
[125I][Tyr(3)]octreotide and [125I]CGP 23996. In functional studies at
human sst(2) receptors expressed in Chinese hamster ovary (CHO) cells,
both the agonist 1 and the two putative antagonists 2 and 3 concentration
dependently inhibited forskolin-stimulated adenylate cyclase and
stimulated luciferase reporter gene expression, with similar efficacy to
the natural ligand somatotropin release inhibiting factor (SRIF)-14.
Compound 1 had similar potency to SRIF-14, which was in the nanomolar
range, whereas 2 and 3 were 10-100-fold less potent. The intrinsic
activity of 2 and 3 was too high to allow antagonist studies to be carried
out. In conclusion, in contrast to previous findings, all three compounds
are potent agonists at recombinant human sst(2) receptors.

L10 ANSWER 3 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:814182 CAPLUS
DOCUMENT NUMBER: 137:329414
TITLE: Polypeptides for treatment of Alzheimer's disease or
use as cognition enhancers
INVENTOR(S): Mileusnic, Radmila; Rose, Steven Peter Russell
PATENT ASSIGNEE(S): The Open University, UK
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002083729	A2	20021024	WO 2002-GB1769	20020417
WO 2002083729	A3	20030731		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,

UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2003166529 A1 20030904 US 2001-998491 20011130
CA 2444530 AA 20021024 CA 2002-2444530 20020417
EP 1381627 A2 20040121 EP 2002-720228 20020417
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
GB 2391548 A1 20040211 GB 2003-26855 20020417
US 2004106552 A1 20040603 US 2003-475281 20031016
PRIORITY APPLN. INFO.: GB 2001-9558 A 20010418
GB 2001-20084 A 20010817
US 2001-998491 A1 20011130
GB 2002-7387 A 20020328
WO 2002-GB1769 W 20020417
OTHER SOURCE(S): MARPAT 137:329414
AB The invention provides a compd. having formula X1-Arg-Xaa-Arg-X2 in which
X1 and X2 are up to 30 amino acid residues and Xaa is an amino acid
residue. A preferred compd. is the tripeptide ***Arg*** - ***Glu***
- ***Arg*** which corresponds to amino acid residues 328 to 330 of
human amyloid precursor protein. The invention further provides a deriv.
of a polypeptide having the formula: X1-Arg-Xaa-Arg-X2 wherein X1 and X2,
which may be the same or different, each represents from zero to 30
natural or synthetic amino acid residues or derivs. thereof and Xaa
represents a natural or synthetic amino acid residue or deriv. thereof, at
least one functional group of at least one said amino acid residue or
deriv. thereof being protected by a protective group. The compds. of the
invention are believed to be useful in the treatment of Alzheimer's
disease and as cognitive enhancers.

L10 ANSWER 4 OF 42 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
STN
ACCESSION NUMBER: 2001:458548 BIOSIS
DOCUMENT NUMBER: PREV200100458548
TITLE: Urocortin peptides, nucleic acid encoding same methods for
using same.
AUTHOR(S): Vale, Wylie W., Jr. [Inventor, Reprint author]; Vaughan,
Joan [Inventor]; Donaldson, Cynthia J. [Inventor]; Lewis,
Kathy A. [Inventor]; Sawchenko, Paul [Inventor]; Rivier,
Jean E. F. [Inventor]; Perrin, Marilyn H. [Inventor]
CORPORATE SOURCE: La Jolla, CA, USA
ASSIGNEE: The Salk Institute for Biological Studies, San
Diego, CA, USA
PATENT INFORMATION: US 6214797 April 10, 2001
SOURCE: Official Gazette of the United States Patent and Trademark
Office Patents, (Apr. 10, 2001) Vol. 1245, No. 2. e-file.
CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Sep 2001
Last Updated on STN: 22 Feb 2002
AB Urocortin (Ucn) is a native mammalian peptide generally related to
Urotensin I and Corticotropin Releasing Factor (CRF). Human Ucn has the
formula: Asp-Asn-Pro-Ser-Leu-Ser-Ile-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Thr-
Leu-Leu-Gl u-Leu-Ala-Arg-Thr-Gln-Ser-Gln-***Arg*** - ***Glu*** -
Arg -Ala-Glu-Gln-Asn-Arg-Ile-Ile-Phe-A sp-Ser-Val-NH2 (SEQ ID
NO:15). Rat-derived Ucn is identical but for 2 substitutions, Asp2 for
Asn2 and Pro4 for Ser4. Ucn or analogs thereof or pharmaceutically
acceptable salts can be administered to humans and other mammals to
achieve substantial elevation of ACTH, beta-endorphin, beta-lipotropin,
other products of the pro-opiomelanocortin gene and corticosterone. They
can also be used to lower blood pressure over an extended period of time,
as stimulants to elevate mood and to improve memory and learning
performance, as well as diagnostically. Shortened fragments may be
administered to release endogenous CRF and/or Ucn in the brain and
peripherally. Ucn antagonists can be used to block the action of Ucn
and/or CRF, as can antibodies to Ucn. Labelled Ucn agonists and
antagonists can be used in drug screening assays along with CRF receptors;
they may also be used diagnostically along with Ucn antibodies.

L10 ANSWER 5 OF 42 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2001277431 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11369854
TITLE: Energy landscape of a peptide consisting of alpha-helix,
3(10)-helix, beta-turn, beta-hairpin, and other disordered
conformations.
AUTHOR: Higo J; Ito N; Kuroda M; Ono S; Nakajima N; Nakamura H
CORPORATE SOURCE: Biomolecular Engineering Research Institute (BERI), Suita,
Osaka 565-0874, Japan.. higo@ls.toyaku.ac.jp
SOURCE: Protein science : a publication of the Protein Society,
(2001 Jun) 10 (6) 1160-71.

Journal code: 9211750. ISSN: 0961-8368.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20011022
Last Updated on STN: 20011022
Entered Medline: 20011018
AB The energy landscape of a peptide [Ace-Lys-Gln-Cys-***Arg*** -
Glu - ***Arg*** -Ala-Nme] in explicit water was studied with a
multicanonical molecular dynamics simulation, and the AMBER parm96 force
field was used for the energy calculation. The peptide was taken from the
recognition helix of the DNA-binding protein, c-MYB: A rugged energy
landscape was obtained, in which the random-coil conformations were
dominant at room temperature. The CD spectra of the synthesized peptide
revealed that it is in the random state at room temperature. However, the
300 K canonical ensemble, Q(300K), contained alpha-helix, 3(10)-helix,
beta-turn, and beta-hairpin structures with small but notable
probabilities of existence. The complete alpha-helix, imperfect
alpha-helix, and random-coil conformations were separated from one another
in the conformational space. This means that the peptide must overcome
energy barriers to form the alpha-helix. The overcoming process may
correspond to the hydrogen-bond rearrangements from peptide-water to
peptide-peptide interactions. The beta-turn, imperfect 3(10)-helix, and
beta-hairpin structures, among which there are no energy barriers at 300
K, were embedded in the ensemble of the random-coil conformations. Two
types of beta-hairpin with different beta-turn regions were observed in
Q(300K). The two beta-hairpin structures may have different mechanisms
for the beta-hairpin formation. The current study proposes a scheme that
the random state of this peptide consists of both ordered and disordered
conformations. In contrast, the energy landscape obtained from the parm94
force field was funnel like, in which the peptide formed the helical
conformation at room temperature and random coil at high temperature.

L10 ANSWER 6 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:876273 CAPLUS
DOCUMENT NUMBER: 136:195811
TITLE: Energy topography and folding mechanism of small
peptides obtained by multicanonical MD method
AUTHOR(S): Higo, Junichi; Ito, Akisato; Ono, Satoshi; Nakajima,
Shinsuke; Kuroda, Masataka; Nakamura, Haruki
CORPORATE SOURCE: Department of Life Science, Tokyo Department of
Pharmacy, Japan
SOURCE: Bussei Kenkyu (2001), 76(6), 832-834
CODEN: BUSKB2; ISSN: 0525-2997
PUBLISHER: Bussei Kenkyu Kankokai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB A discussion is given of the authors' research on energy topog. and
folding mechanism of small peptides, esp. [Ace-Lys-Gln-Cys- ***Arg*** -
Glu - ***Arg*** -Ala-Nme], obtained by multicanonical MD method.

L10 ANSWER 7 OF 42 MEDLINE on STN
DUPLICATE 4
ACCESSION NUMBER: 2001385216 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11439102
TITLE: Involvement of the chicken liver 6-phosphofructo-2-
kinase/fructose-2,6-bisphosphatase sequence His444-
.***Arg*** - ***Glu*** - ***Arg*** in modulation of
the bisphosphatase activity by its kinase domain.
AUTHOR: Zhu Z; Ling S; Yang Q H; Li L
CORPORATE SOURCE: State Key Laboratory of Molecular Biology, Institute of
Biochemistry and Cell Biology, Shanghai Institutes for
Biological Sciences, Chinese Academy of Sciences, Shanghai
200031, China.
SOURCE: Biochemical journal, (2001 Jul 15) 357 (Pt 2) 513-20.
Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200108
ENTRY DATE: Entered STN: 20010827
Last Updated on STN: 20010827
Entered Medline: 20010823
AB The bisphosphatase activity of the hepatic bifunctional enzyme
6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase is repressed by its
kinase domain, and regulated by cAMP-dependent protein kinase
(PKA)-catalysed phosphorylation. In the present study, the mechanism by
which the bisphosphatase activity is repressed by the kinase domain and
regulated by phosphorylation was investigated. We found that truncation
of the C-terminus of the enzyme by 25, but not 20, amino acids
dramatically enhanced the catalytic rate of the bisphosphatase, abrogated
the inhibition by the kinase domain, and eliminated the effect of
PKA-mediated phosphorylation on activity. In addition, mutation of

His444- ***Arg*** - ***Glu*** - ***Arg*** to Ala-Ala-Glu-Ala had
similar effects as the deletion. Moreover, the mutations also
significantly affected the phosphorylation-mediated regulation of the
kinase activity of the enzyme. Furthermore, the mutations altered the
pH-dependence of the bisphosphatase, and the mutant bisphosphatases were
more sensitive to modification by diethyl pyrocarbonate and
guanidine-induced inactivation than the wild-type enzyme. Taken together,
these results demonstrate that the sequence His444-***Arg*** -
Glu - ***Arg*** plays a critical role in repression of the
bisphosphatase activity by both the N-terminal kinase domain and the
C-terminal tail itself. These results also explain the activation of the
bisphosphatase activity by PKA-catalysed phosphorylation, by suggesting
that phosphorylation may relieve the inhibitory effect of the kinase
domain that is mediated by the three basic residues in this sequence.

L10 ANSWER 8 OF 42 MEDLINE on STN
DUPLICATE 5
ACCESSION NUMBER: 2002012591 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11391775
TITLE: Cooperative helix stabilization by complex Arg-Glu salt
bridges.
AUTHOR: Olson C A; Spek E J; Shi Z; Vologodskii A; Kallenbach N R
CORPORATE SOURCE: Department of Chemistry, New York University, New York, New
York 10003, USA.
SOURCE: Proteins, (2001 Aug 1) 44 (2) 123-32.
Journal code: 8700181. ISSN: 0887-3585.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20020121
Last Updated on STN: 20020121
Entered Medline: 20011204
AB Among the interactions that stabilize the native state of proteins, the
role of electrostatic interactions has been difficult to quantify
precisely. Surface salt bridges or ion pairs between acidic and basic
side chains have only a modest stabilizing effect on the stability of
helical peptides or proteins: estimates are roughly 0.5 kcal/mol or less.
On the other hand, theoretical arguments and the occurrence of salt bridge
networks in thermophilic proteins suggest that multiple salt bridges may
exert a stronger stabilizing effect. We show here that triads of charged
side chains, ***Arg*** (+)- ***Glu*** (-)-***Arg*** (+) spaced at
i,i+4 or i,i+3 intervals in a helical peptide stabilize alpha helix by
more than the additive contribution of two single salt bridges. The free
energy of the triad is more than 1 kcal/mol in excess of the sum of the
individual pairs, measured in low salt concentration (10 mM). The effect
of spacing the three groups is severe; placing the charges at i,i+4 or
i,i+3 sites has a strong effect on stability relative to single bridges;
other combinations are weaker. A conservative calculation suggests that
interactions of this kind between salt bridges can account for much of the
stabilization of certain thermophilic proteins.

L10 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:290638 CAPLUS
DOCUMENT NUMBER: 134:277172
TITLE: Mammalian cDNAs encoding SNORF orphan receptors
INVENTOR(S): Borowsky, Beth; Pathirana, Marie Sudam; Ogozalek,
Kristine L.; Lichtblau, Harvey; Bonini, James A.
PATENT ASSIGNEE(S): Synaptic Pharmaceutical Corporation, USA
SOURCE: PCT Int. Appl., 138 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000060081	A1	20001012	WO 2000-US9244	20000406
US 6117990	A	20000912	US 1999-286805	19990406
CA 2332574	AA	20001012	CA 2000-2332574	20000406
EP 1084238	A1	20010321	EP 2000-921829	20000406

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: US 1999-286805 A 19990406
WO 2000-US9244 W 20000406
AB This invention provides a recombinant nucleic acid comprising a nucleic
acid a G protein-coupled receptor, wherein the G protein-coupled receptor
comprises contiguous amino acids having the sequence Lys-Xaa-Arg-Val-Ala-
Xaa- ***Arg*** - ***Glu*** - ***Arg*** or Phe-Thr-Xaa-Ser-Val-Ser-
Gly. Human receptors designated SNORF1, SNORF82, SNORF84; rat receptors
designated SNORF1, SNORF76, SNORF77, SNORF78, SNORF83, SNORF85, SNORF86,
SNORF88, SNORF89; and a mouse SNORF1 receptor are provided.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 1999:275215 CAPLUS
DOCUMENT NUMBER: 131:84479
TITLE: Electrostatic interactions between side chains of
.alpha.-amino acids: conductance studies
AUTHOR(S): Rajeswari, M. R.
CORPORATE SOURCE: Department of Biochemistry, All India Institute of
Medical Sciences, New Delhi, 110029, India
SOURCE: Journal of Biochemistry, Molecular Biology and
Biophysics (1999), 2(4), 287-292
CODEN: JBMBF6; ISSN: 1025-8140
PUBLISHER: Harwood Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The equivalent conductance .lambda., of six .alpha.-amino acids glycine
(Gly), alanine (Ala), aspartic acid (Asp), glutamic acid (Glu), lysine
(Lys) and arginine (Arg) and the .lambda.0 (expt.) of 1: 1 (mole ratio)
mixts. of .alpha.-amino acids, (1) Asp: Arg; (2) Asp: Lys; (3) Glu: Arg;
(4) Glu: Lys; (5) Arg: Gly; (6) Glu: Gly and (7) Arg: Ala were measured in
water at 25.degree.. The conductance of the above mixts., .lambda.
(calc.), was also calcd. using the conductance of the fully charged
species (with three groups, .alpha.-NH3+, .alpha.-COO- and
guanidinium/.epsilon.-NH3+) of Arg and Lys and of triply charged species
(with .alpha.-NH3+, .alpha.-COO- and .beta./.gamma.-COO-) of Asp and Glu
which were detd. using the individual salt data of amino acids. Neg.
deviations were obsd. only in systems (1)-(4); the differences,
.DELTA..lambda.0 (expt.-calc.) are attributed to "ion-pairs" between the
side chains of the .alpha.-amino acids. The order of the strength of the
"specific" interaction between the charged side chains of amino acids in
mixts. studied is as follows: Asp: ***Arg*** > ***Glu*** :
Arg > Asp: Lys > Glu: Lys.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 11 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:184608 CAPLUS
DOCUMENT NUMBER: 126:166860
TITLE: Preparation and formulation of Urocortin peptides as
pharmaceuticals
INVENTOR(S): Vale, Wylie W., Jr.; Vaughan, Joan; Donaldson, Cynthia
J.; Lewis, Kathy A.; Sawchenko, Paul; Rivier, Jean E.
F.; Perrin, Marilyn H.
PATENT ASSIGNEE(S): Salk Institute for Biological Studies, USA
SOURCE: PCT Int. Appl., 90 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9700063	A2	19970103	WO 1996-US10240	19960612
WO 9700063	A3	19970123		

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA

CA 2223792	AA	19970103	CA 1996-2223792	19960612
AU 9662777	A1	19970115	AU 1996-62777	19960612
EP 845035	A2	19980603	EP 1996-921584	19960612

R: CH, DE, ES, FR, GB, IT, LI

JP 2002504802	T2	20020212	JP 1997-503312	19960612
US 6214797	B1	20010410	US 1997-981189	19971210
US 2003032587	A1	20030213	US 2001-818009	20010326

PRIORITY APPLN. INFO.: US 1995-490314 A 19950613
US 1995-2223P P 19950811
US 1995-28144P P 19950613
WO 1996-US10240 W 19960612
US 1997-981189 A3 19971210
OTHER SOURCE(S): MARPAT 126:166860

AB Urocortin (Ucn) is a native mammalian peptide generally related to
Urotensin I and ACTH Releasing Factor (CRF). Human Ucn has the formula:
Asp-Asn-Pro-Ser-Leu-Ser-Ile-Asp-Leu-Thr-Phe-His-Leu-Arg-Thr-Leu-Glu-Leu-
Ala-Arg-Thr-Gln-Ser-Gln- ***Arg*** - ***Glu*** - ***Arg***
-Ala-Glu-Gln-Asn-Arg-Ile-Phe-Asp-Ser-Val-NH2. Rat-derived Ucn is
identical but for 2 substitutions; asp2 for Asn2 and Pro4 for Ser4. Ucn
or analogs thereof or pharmaceutically acceptable salts can be
administered to humans and other mammals to achieve substantial elevation
of ACTH, .beta.-endorphin, .beta.-lipotropin, other products of the
pro-opiomelanocortin gene and corticosterone. They can also be used to
lower blood pressure over an extended period of time, as stimulants to
elevate mood and to improve memory and learning performance, as well as
diagnostically. Shortened fragments may be administered to release
endogenous CRF and/or Ucn in the brain and peripherally. Ucn antagonists
can be used to block the action of Ucn and/or CRF, as can antibodies to
Ucn. Labeled Ucn agonists and antagonists can be used in drug screening
assays along with CRF receptors; they may also be used diagnostically
along with Ucn antibodies.

L10 ANSWER 12 OF 42 MEDLINE on STN
DUPLICATE 7
ACCESSION NUMBER: 97433287 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9288927
TITLE: The bioactive conformation of neuropeptide Y analogues at
the human Y2-receptor.
AUTHOR: Rist B; Ingenhoven N; Scapozza L; Schnorrenberg G; Gaida W;
Wieland H A; Beck-Sickinger A G
CORPORATE SOURCE: Department of Pharmacy, ETH Zurich, Switzerland.
SOURCE: European journal of biochemistry / FEBS, (1997 Aug 1) 247
(3) 1019-28.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199710
ENTRY DATE: Entered STN: 19971013
Last Updated on STN: 19971013
Entered Medline: 19971002
AB Several attempts to investigate the bioactive conformation of neuropeptide
Y have been made so far. As cyclic peptides are much more rigid than
linear ones, we decided to synthesise cyclic analogues of the C-terminal
dodekapeptide amide neuropeptide Y Ac-25-36. Cyclisation was performed by
side chain lactamisation of ornithine or lysine and glutamic or aspartic
acid. The affinity of the 19 peptides ranged from Ki 0.6 nM to greater
than 10,000 nM. We found that the size, position, orientation,
configuration. and the location of the cycle plays an important role for
receptor recognition. Circular dichroic studies have been performed to
characterise the secondary structure of each peptide. Receptor binding
studies were carried out on human neuroblastoma cell lines SK-N-MC (Y1)
and SMS-KAN (Y2), and on rabbit kidney membranes (Y2). The
pharmacological and spectral data showed that the alpha-helix content was
not the predominant factor for high Y2-receptor affinity. Instead, the
location and the size of the hydrophobic lactam bridge, and the conserved
C-terminal tetrapeptide (***Arg*** - ***Glu*** - ***Arg*** -Tyr)
seemed to be the main parameters. Using molecular dynamics, the
structures of four cyclic peptides (i,i+4) have been investigated and
compared with the previously published NMR structure of one of the cyclic
peptide analogues. Significant differences have been found in the overall
three-dimensional fold of the peptides. The distances between the N- and
the C-terminus allow discriminatión between peptides with high binding
affinity and those with low binding affinity, because of the correlation
that was found with the measured affinity. Thus, this study suggests that
a turn-like structure and the orientation of the C-terminus towards the
N-terminus play major roles for high affinity binding of cyclic
dodecapeptides to the Y2-receptor. None of the cyclic segments exhibits
significant affinity to the Y1-receptor. Thus, these results support the
hypothesis of a discontinuous binding site of neuropeptide Y at the
Y1-receptor.

L10 ANSWER 13 OF 42 MEDLINE on STN
DUPLICATE 8
ACCESSION NUMBER: 97085352 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8931493
TITLE: Characterization of the phosphorylation site of PP59, a
substrate for cyclic AMP-dependent protein kinase that is
enriched in the synaptic membrane fraction of rat cerebellum.
AUTHOR: Rich R C; Aswad D W
CORPORATE SOURCE: School of Biological Sciences, University of California,
Irvine 92697-4550, USA.
CONTRACT NUMBER: 2T32-MH14599 (NIMH)
NS-17269 (NINDS)
SOURCE: Journal of neurochemistry, (1996 Dec) 67 (6) 2581-9.

Journal code: 2985190R. ISSN: 0022-3042.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199612
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 19970128
Entered Medline: 19961223

AB We have identified previously a synaptic membrane-associated protein,
PP59, that serves as a substrate for cyclic AMP-dependent protein kinase
and is enriched in rat cerebellum. We show here that PP59 can be
extracted from synaptic plasma membranes with a combination of 2% Triton
X-100 plus 1 M KCl. A 290-fold purification of PP59 was achieved by
selective solubilization, followed by continuous-elution preparative gel
electrophoresis. To determine the amino acid sequence surrounding the
cyclic AMP-dependent protein kinase phosphorylation site within PP59, the
partially purified 32P-phosphorylated protein was digested with
chymotrypsin, and radiolabeled peptides were purified by sequential
reversed-phase HPLC in two different solvent systems. Automated Edman
degradation revealed a single phosphorylation site contained within the
sequence Ala- ***Arg*** - ***Glu*** - ***Arg*** - Ser-Asp-Ser(P)-Thr-
Gly-Ser-Ser-Ser-Val-Tyr. No strong sequence homology to this peptide
fragment with other known peptides or proteins in the SwissProt, PIR, or
GenPept databases could be found. A synthetic peptide containing this
unique 14-amino acid sequence was used to develop polyclonal anti-peptide
antibodies that were affinity-purified and shown to recognize intact PP59
as determined by western blotting. These antibodies specifically
inhibited the phosphorylation of PP59 by cyclic AMP-dependent protein
kinase in an in vitro phosphorylation assay containing synaptic plasma
membranes.

L10 ANSWER 14 OF 42 MEDLINE on STN
DUPLICATE 9
ACCESSION NUMBER: 95112855 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7813480
TITLE: Evidence for a loop-like insertion mechanism of pro-Omp A into the inner membrane of Escherichia coli.
AUTHOR: Kuhn A; Kiefer D; Kohne C; Zhu H Y; Tschantz W R; Dalbey R E
CORPORATE SOURCE: Department of Microbiology, University of Karlsruhe, Germany.
SOURCE: European journal of biochemistry / FEBS, (1994 Dec 15) 226 (3) 891-7.

Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199502
ENTRY DATE: Entered STN: 19950217
Last Updated on STN: 19950217
Entered Medline: 19950207

AB We have studied the insertion of pro-OmpA into the Escherichia coli
membrane in vivo using various mutants that have either alterations in the
amino-terminal parts of the signal peptide or in the mature region that
flanks the signal peptide. A pro-OmpA mutant with an amino terminal
extension of 142 residues derived from ribulokinase (AraB) was analysed
for its membrane insertion. The AraB portion, which includes a cluster of
seven charged residues close to the signal sequence, did not interfere
with the Sec components and allowed efficient export of OmpA. During
translocation the AraB portion remained in the cytoplasm. Further mutants
of OmpA were constructed in the carboxy-terminal region flanking the
signal sequence. Pro-OmpA does not translocate across the membrane when a
charge cluster, comprised of Lys-Arg- ***Arg*** - ***Glu*** -
Arg , is introduced after positions 5, 11 or 15 of the mature
region, but is translocated when the cluster is introduced after position
22. This defines a region of about 20 residues in the mature part of
pro-OmpA that is crucial for membrane insertion. These results suggest
that in the case of the Sec-dependent pro-OmpA, as with the
Sec-independent M13 procoat, the precursor assumes a loop-like structure
involving the signal peptide and the early part of the mature region,
leaving the amino terminus of the signal peptide at the cytoplasmic face.

L10 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:513675 CAPLUS
DOCUMENT NUMBER: 119:113675
TITLE: Synthetic storage proteins containing defined levels of essential amino acids for improvement of the nutritional value of plants
INVENTOR(S): Falco, Saverio Carl; Keeler, Sharon Jo; Rice, Janet Ann
PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA
SOURCE: PCT Int. Appl., 176 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9303160	A1	19930218	WO 1992-US6412	19920807
W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, PL, RO, RU, SD, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
AU 9224412	A1	19930302	AU 1992-24412	19920807
AU 661334	B2	19950720		
EP 598806	A1	19940601	EP 1992-917644	19920807
R: DE, DK, FR, GB, IT, NL, SE				
JP 07502163	T2	19950309	JP 1992-503771	19920807
ZA 9205984	A	19940210	ZA 1992-5984	19920810
US 5559223	A	19960924	US 1994-182175	19940203

PRIORITY APPLN. INFO.: US 1991-743006 A2 19910809
WO 1992-US6412 A 19920807
OTHER SOURCE(S): MARPAT 119:113675
AB Synthetic polypeptides contg. .gtoreq.4 heptad units d-e-f-g-a-b-c with a,d=Met,Leu,Val,Ile,Thr; e,g=Glu/Lys, Lys/Glu, ***Arg*** / ***Glu*** , ***Arg*** /Asp,Lys/Asp,Glu/Arg,Asp/Arg,Asp/Lys; b,c,f=any amino acid except Gly or Pro and .gtoreq.2 amino acids of b, c, and f selected from Glu, Lys, Asp, Arg, His, Thr, Ser, Asn, Ala, Gln, and Cys), are designed for use as plant seed storage proteins to improve the nutritional value of the seed. These proteins are designed to dimerize as coiled-coils in aq. environments. Up to 43% of essential amino acids Ile, Leu, Lys, Met, Thr, and Val, and up to 14% of the essential amino acids Phe, Trp, and Tyr can be incorporated into these synthetic proteins. Genes for these proteins may be expressed in plants in order to improve the amino acid profile of seed and leaves. Representative polypeptides contg. 4 or more heptad units were synthesized and shown to form dimers or tetramers in soln. Transgenic tobacco plants expressing genes for heptad-contg. polypeptides were prepd. When expressed from the phaseolin promoter, the heptad-contg. protein accumulated in the seeds to 1-2% of the total seed protein.

L10 ANSWER 16 OF 42 MEDLINE on STN
DUPLICATE 10
ACCESSION NUMBER: 93373945 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8103453
TITLE: Prosomatostatin processing in Neuro2A cells. Role of beta-turn structure in the vicinity of the Arg-Lys cleavage site.
AUTHOR: Brakch N; Boileau G; Simonetti M; Nault C; Joseph-Bravo P; Rholam M; Cohen P
CORPORATE SOURCE: Biochimie des Signaux Regulateurs Cellulaires et Moleculaires, Universite Pierre et Marie Curie, Paris, France.
SOURCE: European journal of biochemistry / FEBS, (1993 Aug 15) 216 (1) 39-47.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199310
ENTRY DATE: Entered STN: 19931022
Last Updated on STN: 19970203
Entered Medline: 19931007
AB Proline residues located near the processing sites of human prosomatostatin were previously shown to be important for cleavage of the precursor into somatostatin 28 and somatostatin 14 [Gomez, S., Boileau, G., Zollinger, L., Nault, C., Rholam, M. & Cohen, P. (1989) EMBO J. 8, 2911-2916]. In this study, site-directed and regional mutagenesis of the human prosomatostatin cDNA coupled with analysis by circular-dichroism and Fourier-transform-infrared spectroscopies of the native and mutated peptide sequences were used to elucidate the role of proline in proteolytic processing. Glycine was substituted for proline a position -5 and the beta-turn-promoting sequence Pro- ***Arg*** - ***Glu*** - ***Arg*** , located near the somatostatin-14 cleavage site and predicted to form a beta-turn structure, was replaced by Ser-Ser-Asn-Arg or Tyr-Lys-Gly-Arg, which have been shown by X-ray diffraction to form beta turns in other proteins. Analysis of the prosomatostatin-derived peptides produced by expression of the mutated cDNA species in Neuro2A cells indicated that while Pro-5-->Ala abolished cleavage at the dibasic site, the formation of mutants [Gly-5] prosomatostatin, [Ser-5, Ser-4, Arg-3] prosomatostatin and [Tyr-5, Lys-4, Gly-3] prosomatostatin did not affect cleavage at the dibasic site but produced modifications in both the relative proportions of the generated hormones and in precursor processing efficiency. Moreover, spectroscopical analysis showed that whereas these

substitutions did not modify the presence of a beta turn structure in the
corresponding peptide sequences, replacement of Pro-5-->Ala resulted in a
dramatic increase in alpha-helix accompanied by the significant decrease
of other structures including beta turn. The data support the hypothesis
that the proline residue near the processing site for somatostatin-14
production is an important structural feature for conferring on the
cleavage domain the adequate conformation for accessibility to processing
enzymes and permitting production of equivalent amounts of both hormones.

L10 ANSWER 17 OF 42 MEDLINE on STN
DUPLICATE 11
ACCESSION NUMBER: 92114190 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1370559
TITLE: Mutations within the proteolytic cleavage site of the Rous
sarcoma virus glycoprotein define a requirement for dibasic
residues for intracellular cleavage.
AUTHOR: Dong J Y; Dubay J W; Perez L G; Hunter E
CORPORATE SOURCE: Department of Microbiology, University of Alabama,
Birmingham 35294.
CONTRACT NUMBER: CA-09467 (NCI)
CA-29884 (NCI)
SOURCE: Journal of virology, (1992 Feb) 66 (2) 865-74.
Journal code: 0113724. ISSN: 0022-538X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199202
ENTRY DATE: Entered STN: 19920308
Last Updated on STN: 20000303
Entered Medline: 19920214
AB We investigated the amino acid sequence requirements for intracellular
cleavage of the Rous sarcoma virus glycoprotein precursor by introducing
mutations into the region encoding the cleavage recognition site
(Arg-Arg-Lys-Arg). In addition to mutants G1 (Arg-***Arg*** -
Glu - ***Arg***) and Dr1 (deletion of all four codons) that we
have reported on previously (L. G. Perez and E. Hunter, J. Virol.
61:1609-1614, 1987), we constructed two additional mutants, AR1
(Arg-Arg-Arg-Arg), in which the highly conserved lysine is replaced by an
arginine, and S19 (Ser- ***Arg*** - ***Glu*** - ***Arg***), in
which no dibasic pairs remain. The results of these studies demonstrate
that when the cleavage sequence is deleted (Dr1) or modified to contain
unpaired basic residues (S19), intracellular cleavage of the glycoprotein
precursor is completely blocked. This demonstrates that the cellular
endopeptidase responsible for cleavage has a stringent requirement for the
presence of a pair of basic residues (Arg-Arg or Lys-Arg). Furthermore,
it implies that the cleavage enzyme is not trypsinlike, since it is unable
to recognize arginine residues that are sensitive to trypsin action.
Substitution of the mutated genes into a replication-competent avian
retrovirus genome showed that cleavage of the glycoprotein precursor was
not required for incorporation into virions but was necessary for
infectivity. Treatment of BH-RCAN-S19-transfected turkey cells with low
levels of trypsin resulted in the release of infectious virus,
demonstrating that exogenous cleavage could generate a biologically active
glycoprotein molecule.

L10 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:632892 CAPLUS
DOCUMENT NUMBER: 115:232892
TITLE: Preparation of peptides as reagents for detection of
AIDS antibodies
INVENTOR(S): Ushijima, Koji; Okuda, Kenji; Taniguchi, Naoyuki
PATENT ASSIGNEE(S): Eiken Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03099098	A2	19910424	JP 1989-238005	19890913

PRIORITY APPLN. INFO.: JP 1989-238005 19890913
AB Title peptides H-Ala-Val-Glu-Arg-Tyr-Leu-Lys-Asp-Glu-Gln-Leu-Leu-Gly-Ile-
Trp-Gly-Cys-Ser-Gly-Lys-Leu-Ile-Cys-OH (I) and R-Tyr-Arg-Arg-Asn-(Arg)4-
Trp- ***Arg*** - ***Glu*** - ***Arg*** -OH (II); (R = H,
H-Gly-Thr-Arg-Gln), which selectively bind to AIDS antibodies, are prepd.
on a Biosystems Corp. 430A synthesizer. Detection of AIDS involves
contacting I or II bound on a solid support with a sample liq., binding
antibodies derived from AIDS virus in the sample liq. to the peptides,
removing the sample liq., washing the solid support to remove unbound
antibodies, and treating the solid support with a reagent, e.g. anti-human
IgG, which selectively detects the AIDS antibodies. I detected 100% the
AIDS antibodies in a serum sample of 29 HIV-antibody pos. patients by the

dot-blot method using nitrocellulose membrane-bound I (5 .mu.g/mL) and
anti-IgG biotin-avidin-alkali phosphatase reagent.

L10 ANSWER 19 OF 42 MEDLINE on STN
ACCESSION NUMBER: 90204650 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1969500
TITLE: Biological activities of a synthetic peptide composed of
two unlinked domains from a retroviral transmembrane
protein sequence.
AUTHOR: Wegemer D E; Kabat K G; Kloetzer W S
CORPORATE SOURCE: R. W. Johnson Pharmaceutical Research Institute, San Diego,
California 92121.
SOURCE: Journal of virology, (1990 Apr) 64 (4) 1429-36.
Journal code: 0113724. ISSN: 0022-538X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199005
ENTRY DATE: Entered STN: 19900601
Last Updated on STN: 19970203
Entered Medline: 19900503
AB We report several biological activities of a synthetic peptide whose
sequence contains the highly conserved region of feline leukemia virus
transmembrane protein (TM) synthetically linked to another short
TM-derived sequence particularly rich in polar positive residues. This
29-amino-acid peptide blocked [3H]thymidine uptake 30 to 50% by
concanavalin A-stimulated CD4(+)--but not CD8(+)-enriched murine
splenocytes. Maximal suppression was detected at 12.5 micrograms (3
microM) to 75 micrograms (19 microM) per ml of growth medium; stimulation
of [3H]thymidine uptake was observed at higher peptide concentrations.
The synthetic peptide inhibited but did not stimulate [3H]thymidine uptake
by mitogen-activated thymocytes and antibody production by splenocytes as
determined in a liquid hemolytic plaque assay. Similarities are reported
between a consensus sequence of diverse retroviral TMs and a region of
alpha interferons shown by others to be important for antiviral and
cytostatic properties. The TM sequence-derived synthetic peptide blocked
in a nontoxic and sequence-specific manner the release of murine leukemia
virus from two chronically infected cell lines. We suggest that some of
the biological effects of retroviral TM are mediated through a common
pathway shared with alpha interferons.

L10 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:633652 CAPLUS
DOCUMENT NUMBER: 111:233652
TITLE: Application of protected-peptide S-alkyl thioester
method to the synthesis of HU-type DNA-binding protein
(HBs)
AUTHOR(S): Hojo, Hironobu; Maegawa, Chieko; Yoshimura, Shoko;
Aimoto, Saburo
CORPORATE SOURCE: Inst. Protein Res., Osaka Univ., Osaka, 565, Japan
SOURCE: Peptide Chemistry (1989), Volume Date 1988, 26th,
97-102
CODEN: PECHDP; ISSN: 0388-3698
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A report from a symposium. The title method was applied to the synthesis
of HU-type DNA-binding protein H-Met-Asn-Lys-Thr-Glu-Leu-Ile-Asn-Ala-Val-
Ala-Glu-Thr-Ser-Gly-Leu-Ser-Lys-Lys-Asp-Ala-Thr-Lys-Ala-Val-Asp-Ala-Val-
Phe-Asp-Ser-Ile-Thr-Glu-Ala-Leu-Arg-Lys-Gly-Asp-Lys-Val-Gln-Leu-Ile-Gly-
Phe-Gly-Asn-Phe-Gly-Val- ***Arg*** - ***Glu*** - ***arg***
-Ala-Ala-Arg-Lys-Gly-Arg-Asn-Pro-Gln-Thr-Gly-Glu-Glu-Met-Glu-Ile-Pro-Ala-
Ser-Lys-Val-Pro-Ala-Phe-Lys-Pro-Gly-Lys-Ala-Leu-Lys-Asp-Ala-Val-Lys-OH (I)
isolated from Bacillus stearothermophilus. Four protected fragments were
used in the synthesis of I; 3 of the fragments were prepd. as S-alkyl
thioesters.

L10 ANSWER 21 OF 42 MEDLINE on STN
DUPLICATE 12
ACCESSION NUMBER: 88195948 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2896118
TITLE: Primary structures of somatostatins from the islet organ of
the hagfish suggest an anomalous pathway of
posttranslational processing of prosomatostatin-1.
AUTHOR: Conlon J M; Askensten U; Falkmer S; Thim L
CORPORATE SOURCE: Clinical Research Group for Gastrointestinal Endocrinology
of the Max-Planck-Society, University of Gottingen, Federal
Republic of Germany.
SOURCE: Endocrinology, (1988 May) 122 (5) 1855-9.
Journal code: 0375040. ISSN: 0013-7227.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198806
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19950206
Entered Medline: 19880601
AB The cyclostomes represent the first class of vertebrate in evolution to
develop an endocrine pancreas. Two peptides with somatostatin-like

immunoreactivity were isolated from the islet organ of one such
cyclostome, the Atlantic hagfish (Myxine glutinosa). The primary
structure of the more abundant peptide was established as:
Ala-Val-Glu-Arg-Pro5-Arg-Gln-Asp-Gly-Gln10-Val-His-Glu-Pro- Pro15-Gly-
Arg - ***Glu*** - ***Arg*** -Lys20-Ala-Gly-Cys-Lys-Asn25-Phe-
Phe-Trp-Lys-Thr30-Phe-Thr-Ser-Cys. The second peptide, comprising 27% of
the total immunoreactivity in the islet extract, was identical to
mammalian somatostatin-14. The pathway of posttranslational processing of
prosomatostatin in the hagfish islet differs markedly from the pathway in
the higher vertebrates. In the mammalian pancreas, prosomatostatin is
cleaved at the site of the single arginyl residue (corresponding to
position 6 in hagfish somatostatin-34) and at the arginine-lysine site
(corresponding to positions 19 and 20 in the hagfish peptide) to generate
somatostatin-14 and somatostatin-28(1-12)-peptide. In the hagfish islet,
Arg6 is not used as a cleavage site and cleavage at Arg19-Lys20 represents
only a minor pathway of processing. The data provide further evidence of
the strong evolutionary pressure to conserve the complete amino acid
sequence of somatostatin-14.

L10 ANSWER 22 OF 42 MEDLINE on STN
DUPLICATE 13
ACCESSION NUMBER: 89145030 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3226961
TITLE: The bag cell egg-laying hormones of Aplysia brasiliana and
Aplysia californica are identical.
AUTHOR: Nagle G T; Painter S D; Blankenship J E; Choate J V;
Kurosky A
CORPORATE SOURCE: Marine Biomedical Institute, University of Texas Medical
Branch, Galveston 77550.
CONTRACT NUMBER: CA 17701 (NCI)
NS 22079 (NINDS)
NS 23169 (NINDS)
+
SOURCE: Peptides, (1988 Jul-Aug) 9 (4) 867-72.
Journal code: 8008690. ISSN: 0196-9781.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198904
ENTRY DATE: Entered STN: 19900306
Last Updated on STN: 19970203
Entered Medline: 19890404
AB Egg laying in the marine molluscan genus Aplysia is elicited by an
egg-laying hormone (ELH) which induces ovulation and acts on central
neurons to effect egg-laying behavior. ELH, isolated from the A.
californica bag cells, and three ELH-related peptides, isolated from the
A. californica atrial gland, have been chemically characterized, yet
relatively little is known about homologous peptides in other Aplysia
species. In these studies, the primary structure of A. brasiliana ELH was
determined. Bag cell clusters were extracted in an acidic solution, and
the peptides purified by sequential gel filtration and reversed-phase
HPLC; ELH was identified by bioassay. Amino acid compositional and
sequence analyses demonstrated that the neurohormone was a 36-residue
peptide whose sequence was identical to that of A. californica ELH:
NH2-Ile-Ser-Ile-Asn-Gln-Asp-Leu-Lys-Ala-Ile-Thr-Asp-Met-Leu-Leu-Thr-Glu-
Gln-Ile- ***Arg*** - ***Glu*** - ***Arg*** -Gln-Arg-Tyr-Leu-Ala-Asp-
Leu-Arg-Gln-Arg-Leu-Leu-Glu-Lys-COOH .

L10 ANSWER 23 OF 42 MEDLINE on STN
DUPLICATE 14
ACCESSION NUMBER: 87250626 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2885328
TITLE: Enzymes that process somatostatin precursors. A novel
endoprotease that cleaves before the arginine-lysine
doublet is involved in somatostatin-28 convertase activity
of rat brain cortex.
AUTHOR: Gluschankof P; Gomez S; Morel A; Cohen P
SOURCE: Journal of biological chemistry, (1987 Jul 15) 262 (20)
9615-20.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198708
ENTRY DATE: Entered STN: 19900305
Last Updated on STN: 20000303
Entered Medline: 19870813
AB The selective processing activity which generates both the NH2- and
COOH-terminal fragments of the octacosapeptide somatostatin-28 (S-28) was
investigated. Separation into two distinct proteolytic activities was
achieved by ion-exchange chromatography. An endoprotease cleaving either
the substrate Pro- ***Arg*** - ***Glu*** - ***Arg***
-Lys-Ala-Gly-Ala-Lys-Asn-Tyr-NH2, i.e. [Ala17,Tyr20]S-28-(10-20)-NH2
(peptide I), or the octacosapeptide somatostatin-28, on the NH2 side of
the Arg-Lys doublet was separated from an aminopeptidase B-like activity.
Whereas the endoprotease cleaves a single peptide bond, between Glu12 and
Arg13 of S-28, the aminopeptidase B-like enzyme removes both Arg13 and

Lys14 stepwise from the NH2 terminus of the corresponding COOH-terminal
fragment. This endoprotease activity peaks around pH 8.5, whereas the
optimal aminopeptidase B-like activity is in the pH range 6.2-8.5.
Combination of both enzymes resulted in the recovery of the overall S-28
convertase activity with an optimal pH at 7. In addition, this
endoprotease appears to be very sensitive to divalent cations since it is
strongly inhibited by chelating agents. The use of selectively modified
undecapeptides derived from the reference substrate peptide I by a single
modification of the amino acids Glu12, Arg13, and Lys14 at the cleavage
locus showed that both basic residues are critically important, whereas
Glu12 is not. It is proposed that S-28 processing involves a divalent
cation-sensitive endoprotease that is sensitive to thiol reagents, which
cleaves before the Arg-Lys doublet, which is not trypsin-like, and whose
action is coupled to an aminopeptidase B-like enzyme.

L10 ANSWER 24 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:418085 CAPLUS
DOCUMENT NUMBER: 107:18085
TITLE: Differential binding of somatostatin agonists to
somatostatin receptors in brain and adenohypophysis
AUTHOR(S): Heiman, Mark L.; Murphy, William A.; Coy, David H.
CORPORATE SOURCE: Sch. Med., Tulane Univ., New Orleans, LA, USA
SOURCE: Neuroendocrinology (1987), 45(6), 429-36
CODEN: NUNDAJ; ISSN: 0028-3835
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To improve understanding of the ligand specificity of somatostatin (SRIF)
receptors in pituitary and brain, and to identify analogs that bind to 1
type exclusively, several new SRIF analogs were compared for competitive
binding to pituitary and cerebral cortex membranes. Binding of
[125I-Tyr11]SRIF to hypophysis and brain was of high affinity (dissocn.
const. = 0.76 nM and 0.37 nM, resp.) and was characteristic of binding to
1 class of sites in both tissues. Competition by several SRIF analogs for
such radioligand binding demonstrated that ligand specificity of
adenohypophyseal receptors was distinctly different from that of cerebral
cortex. Two cyclic octapeptides bound to pituitary SRIF receptors with
high affinity [Ki = 0.85 nM and 0.35 nM) and were potent inhibitors of
growth hormone secretion from primary cultured pituitary cells (EC50 =
0.009 nM and 0.017 nM, resp.). However, these selective peptides did not
compete (Ki .mchgt. 1 .mu.M) for radioligand binding to brain. Amidation
of the C-terminal end appeared to strikingly alter brain SRIF receptor
recognition of the substituted ligand. Indeed, such amidation of the
parent peptide resulted in a reduced ability to displace labeled ligand
from brains sites [Ki = 165.3-842.2 nM) but did not affect competition for
pituitary receptors. The results indicate that anterior pituitary SRIF
receptors (SRIFa) have ligand specificities which are clearly different
from those of their brain counterparts (SRIFb). Further, 2 potent SRIFa
agonists were identified which could be key ligands for studying
interactions at the SRIFa receptor as well as being useful selective
therapeutic agents.

L10 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:473351 CAPLUS
DOCUMENT NUMBER: 107:73351
TITLE: Determination of convertase activity
PATENT ASSIGNEE(S): Centre National de la Recherche Scientifique, Fr.
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61260898	A2	19861119	JP 1985-101167	19850513

PRIORITY APPLN. INFO.: JP 1985-101167 19850513
AB Convertase (somatostatin convertase, corticoliberin convertase,
oxytocin/neutrophysin convertase) is detd. with 125I-labeled synthetic
peptides as substrates. Thus, brain cortex tissues from rats were
homogenized with pH 7.4 phosphate buffer contg. 200 mM KCl, centrifuged,
and the ext. was incubated with 125I-labeled peptide I (Pro- ***Arg*** -
Glu - ***Arg*** -Lys-Ala-Gly-Ala-Lys-Asn) at 37.degree. for a
given period of time, 30 mM NH4OAc-CM-52 resin (1:10 vol./vol.) then was
added to terminate the reaction, the reaction mixt. was centrifuged, and
the resin was sepd., washed and counted for the detn. of somatostatin
convertase activity.

L10 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
ACCESSION NUMBER: 1987:423682 CAPLUS
DOCUMENT NUMBER: 107:23682

TITLE: Synthesis of peptide gels for the investigation of
oligopeptide-oligonucleotide interactions
AUTHOR(S): Eckstein, Heiner; Hu, Zheng; Schott, Herbert
CORPORATE SOURCE: Inst. Org. Chem., Univ. Tuebingen, Tuebingen, Fed.
Rep. Ger.
SOURCE: Biopolymers (1986), 25(6), 1055-67
CODEN: BIPMAA; ISSN: 0006-3525
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Peptide gels usable as protein model systems were synthesized by a
crosslinking copolymn. of acryloyl-substituted peptides with
1,4-tetramethylene dimethacrylate. A specially adapted approach to
peptide synthesis allows the removal of the amino terminal
benzyloxycarbonyl group at the end of the peptide synthesis, followed by
the introduction of an acryloyl group. The polymerizable peptide monomers
obtained can be transferred into insol. peptide gels by radical copolymn.
with crosslinking agents. After cleavage of the protecting groups of the
side chains, these peptides gels can be used both as protein model systems
for investigating peptide-oligonucleotide interaction and as sorbents for
affinity chromatog. The prepn. and characterization of the peptide gels
Ala-Lys-Glu-Lys-Ala-OMe, Ala- ***Arg*** - ***Glu*** - ***Arg***
-Ala-OMe, Ala-Arg-Glu-Lys-Ala-OMe (I), and Ala-Arg-Ala-Lys-Ala-OMe as well
as the conditions for the removal of the protecting groups is presented.
Gel I contains the natural peptide sequence Arg-Glu-Lys while the other
gels are analogs of this sequence.

L10 ANSWER 27 OF 42 MEDLINE on STN
DUPLICATE 16
ACCESSION NUMBER: 87055212 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2877919
TITLE: Characterization of coho salmon (Oncorhynchus kisutch)
islet somatostatins.
COMMENT: Erratum in: Gen Comp Endocrinol 1987 Jan;65(1):166
AUTHOR: Plisetskaya E M; Pollock H G; Rouse J B; Hamilton J W;
Kimmel J R; Andrews P C; Gorbman A
CONTRACT NUMBER: AM-09072-19 (NIADDK)
AM-18024 (NIADDK)
AM-18849 (NIADDK)
SOURCE: General and comparative endocrinology, (1986 Aug) 63 (2)
252-63.
Journal code: 0370735. ISSN: 0016-6480.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198701
ENTRY DATE: Entered STN: 19900302
Last Updated on STN: 19970203
Entered Medline: 19870121
AB Three different somatostatins have been isolated from the pancreatic islet
tissue of the coho salmon (Oncorhynchus kisutch) by gel filtration and
HPLC. Two of these peptides contain 14 amino acids and the larger third
peptide consists of 25 amino acids. The sequence of the salmon SST-25 is
Ser-Val-Asp-Asn-Leu-Pro-Pro- ***Arg*** - ***Glu*** - ***Arg***
-Lys-Ala-Gly -Cys-Lys-Asn-Phe-Tyr-Trp-Lys-Gly-Phe-Thr-Ser-Cys. The
sequence of the salmon SST-14-I is Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-
Phe-Thr-Ser-Cys. The other small somatostatin (SST-14-II) which was not
sequenced has an amino acid composition identical to the C-terminal 14
amino acids of the SST-25 and it is probably derived from this larger
form. Evidence for low levels of a somatostatin containing 28 amino acids
is also presented. This SST-28 appears to be an N-terminal extended
precursor of SST-25 or a peptide derived via alternative processing of a
common preprosomatostatin. Injected into juvenile salmon, SST-25 caused a
decline in circulating levels of plasma insulin, depletion of liver
glycogen, and activation of lipolytic pathways. Juvenile salmon treated
with anti-SST-25 serum revealed elevated levels of plasma insulin as well
as an increase of the glycogen content of the liver.

L10 ANSWER 28 OF 42 MEDLINE on STN
DUPLICATE 17
ACCESSION NUMBER: 85289236 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3897221
TITLE: The somatostatin-28 convertase of rat brain cortex is
associated with secretory granule membranes.
AUTHOR: Gomez S; Gluschankof P; Morel A; Cohen P
SOURCE: Journal of biological chemistry, (1985 Sep 5) 260 (19)
10541-5.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198510
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 20000303
Entered Medline: 19851007
AB An Arg-Lys esteropeptidase that converts somatostatin-28 in vitro into
somatostatin-14 was previously characterized in extracts of rat cerebral
cortex. Both the octacosapeptide somatostatin-28 and a synthetic
undecapeptide containing the sequence around the Arg-Lys site, i.e.
Peptide I: Pro- ***Arg*** - ***Glu*** - ***Arg***

-Lys-Ala-Gly-Ala-Lys-Asn-125 I-Tyr (NH2), were used as substrates. We
demonstrate that the converting activity is associated with neurosecretory
granule fractions prepared from both cortical and hypothalamic tissue.
This activity co-sediments with ghosts obtained from intact vesicles by
osmotic shock. After solubilization either by mild ionic strength or
sonication of vesicle membranes, the converting activity appears to
possess properties indistinguishable from the convertase prepared directly
from unfractionated tissue. It cleaves Peptide I to Ala-Gly-Ala-Lys-Asn-
125I-Tyr (NH2) (Peptide II) and generates both the NH2- and COOH-terminal
fragments of somatostatin-28, i.e. somatostatin-28 (1-12) and
somatostatin-14, when the octacosapeptide is used as substrate. The
selectivity appears to be strict and to depend upon the sequence around
the Arg-Lys pair, as inferred from competition studies conducted with
structural analogs possessing either an Arg-Lys or Arg-Arg doublet. It is
concluded that this convertase could represent the enzyme system involved
in the in vivo production of both the dodeca and tetradeca peptides from
their common somatostatin-28 precursor.

L10 ANSWER 29 OF 42 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
STN
ACCESSION NUMBER: 1986:143263 BIOSIS
DOCUMENT NUMBER: PREV198681053679; BA81:53679
TITLE: PURIFICATION AND AMINO-ACID SEQUENCE OF THE OVULATION
NEUROHORMONE OF LYMNAEA-STAGNALIS.
AUTHOR(S): EBBERINK R H M [Reprint author]; VAN LOENHOUT H; GERAERTS W
P M; JOOSE J
CORPORATE SOURCE: BIOLOGICAL LABORATORY, VRIJE UNIVERSITEIT, PO BOX 7161,
1007 MC AMSTERDAM, NETHERLANDS
SOURCE: Proceedings of the National Academy of Sciences of the
United States of America, (1985) Vol. 82, No. 22, pp.
7767-7771.
CODEN: PNASA6. ISSN: 0027-8424.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 25 Apr 1986
Last Updated on STN: 25 Apr 1986
AB The neurosecretory caudodorsal cells of the freshwater pulmonate snail
Lymnaea stagnalis produce an ovulation hormone [caudodorsal cell hormone
(CDCH)] that is stored and released at the periphery of the intercerebral
commissure. In the present study, CDCH has been purified and sequenced by
micromethods. CDCH has been isolated, starting with a hydrochloric acid
extract of commissures. By chromatofocusing, by high-performance,
gel-permeation chromatography, and by reversed-phase, high-performance
liquid chromatography. This procedure resulted in a 1690-fold
purification and a 66% recovery. The data of the sequence analysis of
CDCH are in agreement with the amino acid composition and reveal the
following sequence of 36 amino acids: H-Leu-Ser-Ile-Thr-Asn-Asp-Leu-Arg-
Ala-Ile-Ala-Asp-Ser-Tyr-Leu-Tyr-Asp-Gln-His-Trp-Leu-***Arg*** -
Glu - ***Arg*** -Gln-Glu-Glu-Asn-Leu-Arg-Arg-Arg-Phe-Leu-Glu-Leu-
OH. Enzyme data indinate that the COOH end of the hormone is amidated.
CDCH has a calculated isoelectric point of 9.0 and a calculated M4 of
4529. CDCH shares a 44% homology with the sequence of the egg-laying
hormone of the marine opisthobranch mollusc Aplysia californica.

L10 ANSWER 30 OF 42 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
STN
ACCESSION NUMBER: 1985:339739 BIOSIS
DOCUMENT NUMBER: PREV198580009731; BA80:9731
TITLE: SYNTHESIS OF PARTIAL SEQUENCES OF RIBOSOMAL PROTEINS AND
THEIR DERIVATIZATION WITH ACRYLOYL RESIDUES.
AUTHOR(S): ECKSTEIN H [Reprint author]; HU Z; SCHOTT H; BAYER E
CORPORATE SOURCE: INST FUER ORGANISCHE CHEMIE, AUF DER MORGENSTELLE 18,
D-7400 TUEBINGEN 1, FRG
SOURCE: International Journal of Peptide and Protein Research,
(1985) Vol. 25, No. 4, pp. 355-367.
CODEN: IJPPC3. ISSN: 0367-8377.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB Peptide sequences B-X-B (B = Arg and/or Lys; X = Glu or Asp) are of
considerable interest because of their possible interactions with rRNA.
The syntheses of various protected peptides with the sequence
Ala-B-X-B-Ala (X = Glu or Ala) and [Arg]n-Pro (n = 1-3) are described.
They are carried out in solution according to the conventional peptide
synthesis method. The carbobenzoxy group is used for N.alpha.-protection
and the methyl group for protection of the terminal carboxyl group. The
side chains of Lys and Glu are respectively blocked with the
tert-butyloxycarbonyl and the tertiary butyl group and the guanidinic
function of arginine with the NO2-group. The intermediate peptides are

purified either by extraction or by size exclusion chromatography. A
specially adapted strategy of peptide synthesis allows removal of the
amino terminal Cbo-group at the end of the synthesis and introduction of
an acryloyl group. By radical copolymerization with cross-linking agents
these acryloyl derivatives can be transferred into insoluble peptide gels
suitable for affinity chromatography and for investigating peptide-oligonucleotide interactions. The isolation of the unprotected
peptides Arg-Arg-Arg-Pro, Ala- ***Arg*** - ***Glu*** - ***Arg***
-Ala, Ala-Arg-Glu-Lys-Ala, Ala-Arg-Ala-Lys-Ala, Ala-Lys-Glu-Lys-Ala and
their characterization using amino acid analysis, electrophoresis and
FAB-mass spectrometry is also reported.

L10 ANSWER 31 OF 42 MEDLINE on STN
DUPLICATE 18
ACCESSION NUMBER: 85113184 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2857489
TITLE: Processing of an anglerfish somatostatin precursor to a
hydroxylysine-containing somatostatin 28.
AUTHOR: Spiess J; Noe B D
CONTRACT NUMBER: AM16921 (NIADDK)
AM26378 (NIADDK)
SOURCE: Proceedings of the National Academy of Sciences of the
United States of America, (1985 Jan) 82 (2) 277-81.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198503
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19850301
AB A novel 28-residue somatostatin (SS) has been isolated from anglerfish
pancreatic islets and characterized by complete Edman degradation, peptide
mapping, and amino acid analysis. The primary structure of this
anglerfish SS-28 (aSS-28) containing hydroxylysine (Hyl) was established
to be H-Ser-Val-Asp-Ser-Thr-Asn-Asn-Leu-Pro-Pro-***Arg*** - ***Glu***
- ***Arg*** -Lys-Ala-Gly-Cys- Lys-Asn-Phe-Tyr-Trp-Hyl-Gly-Phe-Thr-Ser-
Cys-OH. This sequence (with the exception of hydroxylysine-23, which is
replaced by lysine) is identical to the sequence of the COOH-terminal 28
residues of prepro-SS II predicted on the basis of cDNA analysis [Hobart,
P., Crawford, R., Shen, L., Pictet, R. & Rutter, W. J. (1980) Nature
(London) 288, 137-141]. This is the first instance in which hydroxylysine
(to date characteristically observed in collagen or collagen-like
structures) has been found in a potential regulatory peptide.
Chromatographic characterization of peptides, radiolabeled in islet
culture, revealed that aSS-28 contained 10-12% of the radioactivity
incorporated into the 8000- to 1000-dalton SS-like polypeptides, whereas
88-90% of this radioactivity was detected in anglerfish SS-14. It appears
probable that aSS-28 represents the predominant primary cleavage product
derived from prepro-SS II by cleavage at the COOH-terminal side of a
single arginine. Based on knowledge of the collagen biosynthesis, it is
speculated that hydroxylation may take place as an early post-translational event.

L10 ANSWER 32 OF 42 MEDLINE on STN
ACCESSION NUMBER: 85303573 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2863928
TITLE: Anglerfish pancreatic islets produce two forms of
somatostatin-28.
AUTHOR: Spiess J; Noe B D
CONTRACT NUMBER: AM-16921 (NIADDK)
AM-26378 (NIADDK)
SOURCE: Advances in experimental medicine and biology, (1985) 188
141-54.
Journal code: 0121103. ISSN: 0065-2598.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198509
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19850930
AB It has been predicted on the basis of cDNA sequence analysis that
anglerfish pancreatic islets contain at least two different
preprosomatostatins (I and II). The C-terminal amino acid sequences of
preprosomatostatin I and II were predicted to be identical to mammalian
hypothalamic somatostatin-14 (SS-14) and its analog [Tyr7, Gly10]SS-14,
respectively. That SS-14 is expressed in anglerfish pancreatic islets,
has been shown earlier in pulse-chase experiments and by chemical
characterization. However, it was observed that [Tyr7, Gly10]SS-14 was
not expressed as such, but as part of larger polypeptides. Pulse-chase
experiments combined with reverse-phase high pressure liquid
chromatography, amino acid analysis with two different chromatographic
systems, and complete Edman degradation indicated that preprosomatostatin
II is processed in anglerfish islets to two different forms of
somatostatin-28 (SS-28). The primary structure of the major form
containing hydroxylysine (Hyl) was determined to be: H-Ser-Val-Asp-Ser-Thr-

Asn-Asn-Leu-Pro-Pro- ***Arg*** - ***Glu*** - ***Arg***
-Lys-Ala-Gly-Cys-Lys-Asn-Phe-Tyr-Trp-Hyl-Gly-Phe-Thr-Ser-Cys-OH. The
amino acid sequence of the minor form differs only at residue 23 by
substitution of lysine for hydroxylysine. This is the first time that
hydroxylysine, an amino acid which characteristically occurs in collagen
or collagen-like structures has been identified in a potential regulatory
peptide. It can be speculated that this amino acid is formed by
post-translational hydroxylation of a lysine C-terminally linked to a
glycine residue and thus modified at a site which has been recognized as
hydroxylation site in collagen or collagen-like structures. The
biological consequences of this unusual modification are being
investigated.

L10 ANSWER 33 OF 42 MEDLINE on STN
DUPLICATE 19
ACCESSION NUMBER: 85038574 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6149550
TITLE: Enzymes processing somatostatin precursors: an Arg-Lys
esteropeptidase from the rat brain cortex converting
somatostatin-28 into somatostatin-14.
AUTHOR: Gluschankof P; Morel A; Gomez S; Nicolas P; Fahy C; Cohen P
SOURCE: Proceedings of the National Academy of Sciences of the
United States of America, (1984 Nov) 81 (21) 6662-6.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198412
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19841219
AB The post-translational proteolytic conversion of somatostatin-14
precursors was studied to characterize the enzyme system responsible for
the production of the tetradecapeptide either from its 15-kDa precursor
protein or from its COOH-terminal fragment, somatostatin-28. A synthetic
undecapeptide Pro- ***Arg*** - ***Glu*** - ***Arg***
-Lys-Ala-Gly-Ala-Lys-Asn-Tyr(NH2), homologous to the amino acid sequence
of the octacosapeptide at the putative Arg-Lys cleavage locus, was used as
substrate, after 125I labeling on the COOH-terminal tyrosine residue. A
90-kDa proteolytic activity was detected in rat brain cortex extracts
after molecular sieve fractionation followed by ion exchange
chromatography. The protease released the peptide 125I-Ala-Gly-Ala-Lys-
Asn-Tyr(NH2) from the synthetic undecapeptide substrate and converted
somatostatin-28 into somatostatin-14 under similar conditions (pH 7.0).
Under these experimental conditions, the product tetradecapeptide was not
further degraded by the enzyme. In contrast, the purified 15-kDa
hypothalamic precursor remained unaffected when exposed to the proteolytic
enzyme under identical conditions. It is concluded that this Arg-Lys
esteropeptidase from the brain cortex may be involved in the in vivo
processing of the somatostatin-28 fragment of prosomatostatin into
somatostatin-14, the former species being an obligatory intermediate in a
two-step proteolytic mechanism leading to somatostatin-14.

L10 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1984:139633 CAPLUS
DOCUMENT NUMBER: 100:139633
TITLE: Pentadecapeptide
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58183656	A2	19831026	JP 1982-66080	19820420
JP 60002320	B4	19850121		

PRIORITY APPLN. INFO.: JP 1982-66080 19820420
AB H-Tyr-Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met-Ala-Pro-***Arg*** - ***Glu*** -
Arg -Lys-OH, useful for the radioimmunoassay of somatostatin 28,
was prepd. by treatment of BOC-Tyr(Br-Z)-Ser(Bzl)-Ala-Asn-Ser(Bzl)-Asn-Pro-
Ala-Met-Ala-Pro-Arg(Tos)-Glu(Bzl)-Arg(Tos)-Lys(Cl-Z)-resin (I) (BOC =
Me3CO2C, Br-Z = o-BrC6H4CH2O2C, Bzl = PhCH2, Tos = tosyl, Cl-Z =
o-ClC6H4CH2O2C) with anisole/HF followed by chromatog. I was prepd. by
sequential coupling of protected amino acid using an automatic peptide
synthesizer.

L10 ANSWER 35 OF 42 MEDLINE on STN
DUPLICATE 20
ACCESSION NUMBER: 83267582 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6135755
TITLE: Structure of somatostatin isolated from bovine retina.
AUTHOR: Marshak D W; Reeve J R; Shively J E; Hawke D; Takami M S;
Yamada T

CONTRACT NUMBER: AM 17328 (NIADDK)
EY 01190 (NEI)
SOURCE: Journal of neurochemistry, (1983 Sep) 41 (3) 601-6.
Journal code: 2985190R. ISSN: 0022-3042.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198309
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19970203
Entered Medline: 19830923

AB Somatostatin-like immunoreactivity (SLI) from bovine retina was purified
and its structure determined. Retinal tissue (1868 g) extracted with 3%
acetic acid yielded 18.6 nmol SLI. This peptide was purified by
chromatography on an affinity column made with anti-somatostatin
antiserum, a reverse-phase C-18 HPLC column, and three sequential
applications on a reverse-phase phenyl HPLC column. The peptide was
purified 103,000-fold from the initial extract with an overall yield of
14.4%. Amino acid sequence determination by an automatic Edman
degradation technique revealed the sequence to be as follows:
Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met- Ala-Pro- ***Arg*** - ***Glu*** -
Arg -Lys-Ala-Gly-(Cys)-Lys- Asn-Phe-Phe-Trp-Lys-Thr-(Phe, Thr, Ser,
Cys). The apparent identity of this peptide with somatostatin
octacosapeptide (S28) purified from other mammalian tissue indicates the
phylogenetic conservation of its structure and facilitates the use of the
retina as a model system for studying the neurotransmitter function of
somatostatin.

L10 ANSWER 36 OF 42 MEDLINE on STN
DUPLICATE 21
ACCESSION NUMBER: 81191203 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7228502
TITLE: Peptide segment coupling in aqueous medium: silver ion
activation of the thiolcarboxyl group.
AUTHOR: Blake J
CONTRACT NUMBER: AM-18677 (NIADDK)
AM-6097 (NIADDK)
GM-2907 (NIGMS)
SOURCE: International journal of peptide and protein research,
(1981 Feb) 17 (2) 273-4.
Journal code: 0330420. ISSN: 0367-8377.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198107
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19810720

AB The use of the thiolcarboxyl function for the assemblage of deblocked
peptide segments in aqueous medium has been investigated. The C-terminal
thiolcarboxyl peptide Ac-Tyr-Arg- ***Arg*** - ***Glu*** - ***Arg***
-Gly-SH (2a) has been synthesized by the solid-phase method. The silver
compound of peptide 2a was coupled to H-Phe-Ala-Glu-Gly-OH in 50% aqueous
dimethylformamide to give a 40% yield of Ac-Tyr-Arg-***Arg*** -
Glu - ***Arg*** -Gly-Phe-Ala-Glu-Gly-OH.

L10 ANSWER 37 OF 42 MEDLINE on STN
DUPLICATE 22
ACCESSION NUMBER: 81101143 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6109284
TITLE: Primary structure of ovine hypothalamic somatostatin-28 and
somatostatin-25.
AUTHOR: Esch F; Bohlen P; Ling N; Benoit R; Brazeau P; Guillemin R
CONTRACT NUMBER: AM-18811-05 (NIADDK)
HD-09690-05 (NICHD)
SOURCE: Proceedings of the National Academy of Sciences of the
United States of America, (1980 Nov) 77 (11) 6827-31.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198103
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19810324

AB The primary structure of the NH2-terminally extended somatostatins
isolated from ovine hypothalamic extracts, one containing 28 residues and
the other 25, has been determined. The structure of somatostatin-28 is
Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met-Ala-Pro- ***Arg*** - ***Glu*** -
Arg -Lys-Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys-OH;
the shorter one, somatostatin-25, has the same sequence as
somatostatin-28 except that the first three NH2-terminal residues are
deleted. The two peptides as isolated were found to be oxidized at the
methionine residue to the methionine sulfoxide. Their structures were
established by subjecting the native peptides to direct sequence analysis
in a Beckman 890C sequencer and identifying the released
phenylthiohydantoin derivatives by high-performance liquid chromatography.
Their structures were confirmed by trypsin digestion and isolation of all
the tryptic peptides, followed by amino acid analysis of the tryptic
fragments. Moreover, some of the tryptic peptides were matched with their
respective synthetic replicates on high-performance liquid chromatography.

L10 ANSWER 38 OF 42 MEDLINE on STN
DUPLICATE 23
ACCESSION NUMBER: 81077276 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6108560
TITLE: Nucleotide sequence of a cloned structural gene coding for
a precursor of pancreatic somatostatin.
AUTHOR: Goodman R H; Jacobs J W; Chin W W; Lund P K; Dee P C;
Habener J F
SOURCE: Proceedings of the National Academy of Sciences of the
United States of America, (1980 Oct) 77 (10) 5869-73.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-J00946
ENTRY MONTH: 198102
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19950206
Entered Medline: 19810226
AB We have constructed and cloned, in bacteria, recombinant plasmids
containing DNA complementary to mRNA coding for a pancreatic
pre-prosomatostatin, a product of the cell-free translation of pancreatic
islet mRNAs shown previously by immunoprecipitation to be a precursor of
somatostatin. A clone containing a nearly full-length cDNA insert of 550
base pairs was identified and appeared to contain the entire coding
sequence for the somatostatin precursor in addition to portions of the 5'
and 3' untranslated regions. mRNA coding for the pre-prosomatostatin is
600-630 bases long as determined by agarose gel electrophoresis and
hybridization with labeled cDNA. Analyses of the nucleotide sequence of
the cDNA revealed a protein of 119 amino acid beginning with methionine
followed by a typical leader sequence containing 18 hydrophobic amino
acids. The tetradecapeptide somatostatin, identical in sequence to
mammalian hypothalamic somatostatin, is located at the carboxy terminus
followed immediately by a stop codon. An ARg-Lys sequence immediately
preceding the sequence of somatostatin is typical of a prohormone cleavage
site. A sequence Ala-Pro-Arg-Glu preceding the Arg-Lys cleavage site is
identical to that found in porcine prosomatostatin. The evolutionary
conservation of the identical amino acid sequence of the somatostatin
tetradecapeptide from fish to mammals is remarkable. In addition, similar
conservation, in fish and mammals, of the sequence Ala-Pro- ***Arg*** -
Glu - ***Arg*** -Lys preceding the coding region for somatostatin
suggets that this particular sequence may have biologic importance in
cellular processing of the somatostatin precursor.

L10 ANSWER 39 OF 42 MEDLINE on STN
ACCESSION NUMBER: 81054799 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6107906
TITLE: Isolation and structure of pro-somatostatin: a putative
somatostatin precursor from pig hypothalamus.
AUTHOR: Schally A V; Huang W Y; Chang R C; Arimura A; Redding T W;
Millar R P; Hunkapiller M W; Hood L E
CONTRACT NUMBER: AM-07467 (NIADDK)
AM-09094 (NIADDK)
GM-06965 (NIGMS)
SOURCE: Proceedings of the National Academy of Sciences of the
United States of America, (1980 Aug) 77 (8) 4489-93.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198101
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19810126
AB An octacosapeptide that we named pro-somatostatin has been isolated from
acid extracts of porcine hypothalami and found to have the amino acid
sequence Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met-Ala-Pro-***Arg*** - ***Glu***
- ***Arg*** -Lys-Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-
Cys. This octacosapeptide possesses high somatotropin (growth hormone)
and prolactin release-inhibiting activity in vitro. It also crossreacts
strongly with antisera generated against the somatostatin
tetradecapeptide. This octacosapeptide is most likely a precursor
(pro-hormone) of somatostatin in the hypothalamus. The existence of still
larger molecular size precursors of somatostatin was also observed.

L10 ANSWER 40 OF 42 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
STN
ACCESSION NUMBER: 1980:210594 BIOSIS
DOCUMENT NUMBER: PREV198070003090; BA70:3090
TITLE: PURIFICATION AND PRIMARY STRUCTURE OF THE NEURO PEPTIDE EGG
LAYING HORMONE OF APLYSIA-CALIFORNICA.
AUTHOR(S): CHIU A Y [Reprint author]; HUNKAPILLER M W; HELLER E;
STUART D K; HOOD L E; STRUMWASSER F
CORPORATE SOURCE: DIV BIOL, CALIF INST TECHNOL, PASADENA, CALIF 91125, USA
SOURCE: Proceedings of the National Academy of Sciences of the
United States of America, (1979) Vol. 76, No. 12, pp.

6656-6660.
CODEN: PNASA6. ISSN: 0027-8424.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB Egg-laying hormone (ELH), a neuropeptide synthesized by the bag cell
neurons, induces egg laying and its correlated behavior in A. californica.
ELH was purified to homogeneity and its primary structure was determined.
This molecule has 36 amino acid residues with a MW of 4385 and a
calculated isoelectric point [pI] of 9.7. Direct microsequence analysis
revealed a single amino acid sequence that is in agreement with the amino
acid composition determined after acid hydrolysis of ELH:
H-Ile-Ser-Ile-Asn-Gln-Asp-Leu-Lys-Ala-Ile-Thr-Asp-Met-Leu-Leu-Thr-Glu-Gln-
Ile- ***Arg*** - ***Glu*** - ***Arg*** -Gln-Arg-Tyr-Leu-Ala-Asp-Leu-
Arg-Gln-Arg-Leu-Leu-Glu-Lys-OH. Enzyme data indicate that the
COOH-terminal lysine may be modified but its exact nature remains to be
determined. There is no similarity between the amino acid sequence of ELH
and that of presently known vertebrate neuropeptides. The 2-step
purification procedure, starting with a homogenate of bag cell clusters,
consisted of cation exchange chromatography on SP C25 (Sephadex) followed
by gel filtration on Bio-Gel P-6, resulting in a 100-fold enrichment of
ELH from bag cell homogenates and a 36% recovery of purified radiolabeled
marker ELH. Analysis of purified ELH radiolabeled with [35S]methionine or
[3H]leucine on isoelectric focusing gels and on 8 M urea/sodium dodecyl
sulfate gels showed only a single peak containing 90% of the radiolabel.
Radiolabeled ELH migrated with a pI of 9.0-9.2 and an apparent MW of
3500-5700. ELH retained egg-laying bioactivity when eluted from this
segment of the gel. Of pure ELH, (2.5 nmol) consistently induces egg
laying at 20.degree. C.

L10 ANSWER 41 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:471468 CAPLUS
DOCUMENT NUMBER: 75:71468
TITLE: Amino acid sequence of viscotoxin B from the European
mistletoe (Viscum album, Loranthaceae)
AUTHOR(S): Samuelsson, Gunnar; Pettersson, Barbro M.
CORPORATE SOURCE: Farmakognostiska Inst., Farm. Fak., Stockholm, Swed.
SOURCE: European Journal of Biochemistry (1971), 21(1), 86-9
CODEN: EJBCAI; ISSN: 0014-2956
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Viscotoxin B from V. album (mistletoe) has been oxidized with performic
acid and digested with trypsin and chymotrypsin. The resulting peptides
have been sepd. by ion exchange chromatog. and subjected to amino acid
sequence detn. by Edman degradation. Free lysine, 6 tryptic and 3
chymotryptic fragments are primary digestion products and permit deduction
of the following amino acid sequence for the 46 amino acids of viscotoxin
B:Lys-Ser-Cys-Cys-Pro-Asn-Thr-Thr-Gly-Arg-Asn-IleTyr-Asn-Thr-Cys-Arg-Leu-
Gly-Gly-Gly-Ser- ***Arg*** - ***Glu*** - ***Arg***
-Cys-Ala-Ser-Leu-Ser-Gly-Cys-Lys-Ile-Ile-Ser-Ala-Ser-Thr-Cys-Pro-Ser-Tyr-
Pro-Asp-Lys, where Cys is half cystine. This sequence is very similar to
the amino acid sequence of viscotoxin A3 from the same plant.

L10 ANSWER 42 OF 42 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1966:69180 CAPLUS
DOCUMENT NUMBER: 64:69180
ORIGINAL REFERENCE NO.: 64:12995f-h
TITLE: New arginine-containing peptides isolated from
Chlorella cells
AUTHOR(S): Kanazawa, Tamotsu; Kanazawa, Kimiko; Morimura, Yuji
CORPORATE SOURCE: Tokugawa Inst. Biol. Res., Tokyo
SOURCE: Plant and Cell Physiology (1965), 6(4), 831-43
CODEN: PCPHA5; ISSN: 0032-0781
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Studies were carried out on analyses and characterization of 7 different
forms of arginine-contg. peptides isolated from cells of C. ellipsoidea,
and an investigation was made of the fates of these peptides in the normal
life cycle of the alga. The peptides were obtained by extg. the
harvested, asynchronously grown algal cells with HClO4, subjecting the
exts. to treatment with 1-fluoro-2,4-dinitrobenzene, chromatographically
sepg. the dinitrophenylated (DNP)-arginine peptides by passing the ext.
mixt. through a weak cation-exchange resin (Amberlite CG 50, 400-600 mesh)
column, and purifying and characterizing the DNP-arginine peptides by
thin-layer chromatography and electrophoresis. Analyses showed that the
amino acid compns. of fractions I-1, I-2, II, III, IV, V, and VI were
Arg-(Glu, Asp), ***Arg*** - ***Glu*** , ***Arg*** - ***Arg*** -
Glu , ***Arg*** -Arg, Arg-(Arg2, Glu)-Glu, Arg-Arg-Arg, and
Arg-(Arg3, Glu), resp. I-1 and I-2 appeared to be identical with X-B1 and
X-B2, resp., reported previously (loc. cit.). These peptides may probably

play roles more important than merely that of reservoirs of amino acids or amino groups. Fractions III, V, and VI were strongly basic. In the synchronously mass-cultured algal cells, the changes in the arginine peptides during the 6 stages in life cycle of the cell were followed. The findings indicated that the arginine derived from peptides was expended not only as such, but also as a source of NH2 groups for the synthesis of other amino acids to be incorporated into newly synthesized protein.